american supply association

1984 OPERATING PERFORMANCE
# of the
P-H-C-P WHOLESALER INDUSTRY
(BASED ON 1983 FINANCIAL DATA)

PROFESSIONALLY PREPARED BY
INDUSTRY INSIGHTS, INC.
2564 BILLINGSLEY ROAD
WORTHINGTON, OHIO 43085

for
AMERICAN SUPPLY ASSOCIATION
20 North Wacker Drive, Suite 2260
Chicago, Illinois 60606

THE NATIONAL ASSOCIATION OF FULL SERVICE WHOLESALERS
OF PLUMBING, HEATING, COOLING AND PIPING PRODUCTS

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THE AMERICAN SUPPLY ASSOCIATION
20 NORTH WACKER DRIVE, SUITE 2260
CHICAGO, IL 60606

John M. McDonald III, President
Bob Slakey, Chairman-Management Information Services Committee
Peter Schwartz, Executive Vice President

THE SURVEY TEAM

For the second consecutive year, the 1984 ASA Annual Operating Performance Report was compiled, tabulated and analyzed by Industry Insights, Inc. in cooperation with the American Supply Association and key industry members. Research support and project design assistance was provided by Management Horizons, Inc.

Industry Insights, headquartered in Worthington, Ohio, is a professional research and consulting firm providing management and marketing services to trade and professional associations and their members. The company specializes in industry operating surveys, compensation studies, educational programs and customized research services.

Management Horizons, Inc., also located in Worthington, Ohio, is a professional research and consulting firm specializing in wholesaling and retailing and consumer goods marketing. The company serves an international clientele of wholesalers, retailers and manufacturers as well as financial institutions, advertising agencies, brokerage houses and other service firms.

About This Report

This 1984 American Supply Association Operating Performance Report of the P-H-C-P Wholesaler Industry (Based on 1983 Financial Data) represents the most complete, accurate and up-to-date data base of P-H-C-P wholesaler financial and operating information published anywhere. The information contained in this report is designed to provide easy-to-understand guidelines for identifying business performance improvement opportunities.

For the second consecutive year, the Operating Performance Report (OPR) was prepared by Industry Insights, Inc. of Worthington, Ohio, working closely with the American Supply Association staff. Confidential survey forms (refer to Appendix for sample) were sent to ASA members in late March and nearly 300 completed and usable responses were received.

As in the past, this year's report includes comparative financial ratios and statistics by type of firm, sales volume size, high profit firms and geographic region. While this year's study contains all the same valuable information that was included in the 1983 report, several enhancements have been made.

(1) Percentage balance sheet data has been included to indicate the typical financial position of firms in the industry regarding assets and liabilities. Such information can be a useful tool for establishing and maintaining strong relations with bankers.

(2) Certain three year trend data has been included along with appropriate analysis and interpretation. This information is important for identifying shifts occurring within the industry which may be representative of future conditions.

Also featured in this year's report is an overall analysis of industry performance relative to U.S. economic conditions, including both sales and profitability results.

Perhaps the most valuable feature of the ASA Operating Performance Report is that all firms participating in the survey received, absolutely free, a confidential Individual Company Report. This report presents a company's own ratios and data computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. (A representative page from a sample Individual Company Report is shown below.)

On any given line of the Individual Company Report a firm's own data is shown along with industry averages for firms of a comparative sales volume, type of business, geographic region, etc. Thus, the individual owner/manager is provided invaluable information without having to spend time and effort making the calculations manually. In addition, for the first time ever, this year's Individual Company Reports included two-year trend data in graphical form for any firm which participated in both the 1983 and 1984 studies.

SAMPLE

1983 ASA OPERATING SURVEY
INDIVIDUAL COMPANY REPORT
(1982 FISCAL YEAR)

*** CONFIDENTIAL ***

	Your Firm	YOUR REGION		HIGH PROFIT FIRMS	
		TYPICAL	RANGE OF COMMON EXPERIENCE	TYPICAL	RANGE OF COMMON EXPERIENCE
Overall Performance					
Net Profit After Tax to Net Worth	1.19%	6.55%	2.02 - 11.71%	9.43%	5.97 - 14.66%
Total Assets to Net Worth	1.90 TIMES	1.43X	1.32 - 3.27X	1.52X	1.29 - 2.40X
Net Profit After Tax to Total Assets	0.63%	3.61%	1.46 - 6.86%	5.39%	3.54 - 7.74%
Net Sales to Total Assets	3.13 TIMES	2.40X	2.08 - 2.82X	2.36X	1.98 - 2.81X
Net Profit After Tax to Net Sales	0.20%	1.40%	0.60 - 3.40%	2.30%	1.60 - 3.40%
Net Profit Before Tax to Total Assets	0.94%	4.76%	1.74 - 10.65%	7.77%	4.76 - 11.62%
EBIT to Total Assets	2.72%	6.76%	3.75 - 14.07%	10.32%	7.16 - 15.30%
Sales Analysis					
Net Sales ($000)	$2,206	$3,641	$2,667 - 5,365	$3,710	$2,520 - 8,132
Percent Sales Change from Prior Year	3.00%	-3.06%	-8.07 - 3.80%	-2.99%	-7.96 - 5.51%
Sales Mix:					
Direct Sales	12.0%	4.9%	0.2 - 8.7%	10.6%	4.4 - 15.2%
Warehouse Sales - Counter	36.0%	21.3%	0.0 - 31.5%	35.1%	20.3 - 42.1%
Warehouse Sales - Delivery	52.0%	66.7%	56.8 - 88.3%	54.2%	43.2 - 68.5%
TOTAL SALES	100.0%	100.0%	100.0 - 100.0%	100.0%	100.0 - 100.0%
Product Sales Mix					
Plumbing Supplies & Equipment	60.0%	40.7%	28.0 - 56.3%	76.9%	63.0 - 90.0%
Heating & Cooling Supplies & Equipment	20.0%	29.0%	8.8 - 40.0%	10.3%	0.0 - 20.0%
Industrial P-V-F (Pipes-Valves-Fittings)	20.0%	22.0%	2.0 - 30.0%	7.5%	0.0 - 10.0%
Other Industrial Supplies & Equipment	%	3.2%	0.0 - 2.0%	2.4%	0.0 - 5.0%
Other Products	%	5.1%	0.0 - 1.3%	2.8%	0.0 - 1.0%
TOTAL SALES	100.0%	100.0%	100.0 - 100.0%	100.0%	100.0 - 100.0%
Gross Margin					
Gross Margin on Net Sales	25.4%	25.6%	23.1 - 27.5%	26.2%	22.7 - 28.5%
Gross Margin on Direct Shipments	11.0%	10.0%	6.3 - 13.5%	10.0%	8.0 - 14.1%
Gross Margin on Warehouse Sales	27.4%	24.9%	22.7 - 27.6%	26.3%	23.2 - 29.4%
Asset and Financial Management					
Current Asset Turn (Sales/Current Assets)	3.50 TIMES	2.68X	2.24 - 3.05X	2.75X	2.28 - 3.35X
Total Debt to Net Worth	90.0%	43.0%	31.7 - 227.0%	51.8%	29.3 - 131.0%
Current Debt to Net Worth	68.1%	39.1%	27.7 - 165.9%	40.3%	25.5 - 86.4%
Current Assets to Current Debt	2.50 TIMES	2.95X	1.74 - 4.26X	3.32X	1.87 - 4.29X
Current Assets Minus Inventory/Curr Debt	0.86 TIMES	1.16X	0.72 - 2.17X	1.33X	0.88 - 1.98X
Invoice/Transaction Data					
Billing Lines Per Invoice	6.3	5.6	4.3 - 8.5	7.0	5.0 - 10.0
Average Invoice Size	$128	$135	$104 - 265	$153	$114 - 193
Average Billing Line	$20.36	$30.54	$12.43 - 70.46	$22.26	$13.34 - 32.36

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P-H-C-P Wholesaling --
Overview of Industry Performance 1983

After several years of low or negative growth, the economy entered a phase of vigorous recovery in 1983. In the third quarter, the recovery ended (as the previous "high water mark" was reached), and a period of expansion has continued through the first half of 1984. In fact, one of the few negative factors about the current state of the economy is that interest rates continue to be very high. This is especially true given the relatively low inflation experienced during the past two years or so.

1983 Sales Performance

Like the economy, sales of wholesalers of hardware, plumbing, heating, air conditioning and refrigeration equipment and supplies[1] rebounded in 1983. According to the U.S. Census Bureau, sales increased 11.6% last year compared to 4.1% for all wholesale trade. This was the first year since 1977 that hardware, plumbing, heating and cooling wholesalers have grown faster than all wholesale trade.

This strong sales growth continued through the first four months of 1984. Sales of hardware, plumbing, heating and cooling wholesalers through April were 21% higher than the same four months of 1983. This group of wholesalers continued to grow faster than all wholesale trade in the first part of 1984.

The government also revised its 1982 sales figures. The decrease of 10.5% reported last year for hardware, plumbing, heating and cooling wholesalers was revised to a decrease of 6.8%, which is much more in line with the 4.3% sales drop reported by respondents to the ASA survey.

As a matter of fact, 1983 was a good year for durables wholesaling altogether. All durables wholesalers showed an 8.1% increase for 1983 compared to an 8.4% decline the prior year.

ASA members experienced a 10.5% sales increase in 1983, just slightly less than the 11.6% reported by the Census Bureau. Plumbing equipment and supplies wholesalers showed the strongest increase (18.1%) while industrial pipes-valves-fittings (P-V-F) wholesalers actually showed a decrease of 6.8%. Wholesalers with a major commitment to both plumbing and industrial P-V-F grew at a rate of 12.7% while those emphasizing HVAC and other products increased sales by 7.8%.

Among wholesalers emphasizing both plumbing and industrial P-V-F, the medium size companies grew fastest in 1983. However, among the other types of wholesalers listed in Exhibit 2, the large firms showed the highest sales increases and the smallest showed the lowest.

[1] This classification of businesses is the closest to P-H-C-P wholesaling for which the government regularly publishes sales data.

Exhibit 1

Growth of Hardware, Plumbing, Heating and Cooling vs. All Wholesale Sales

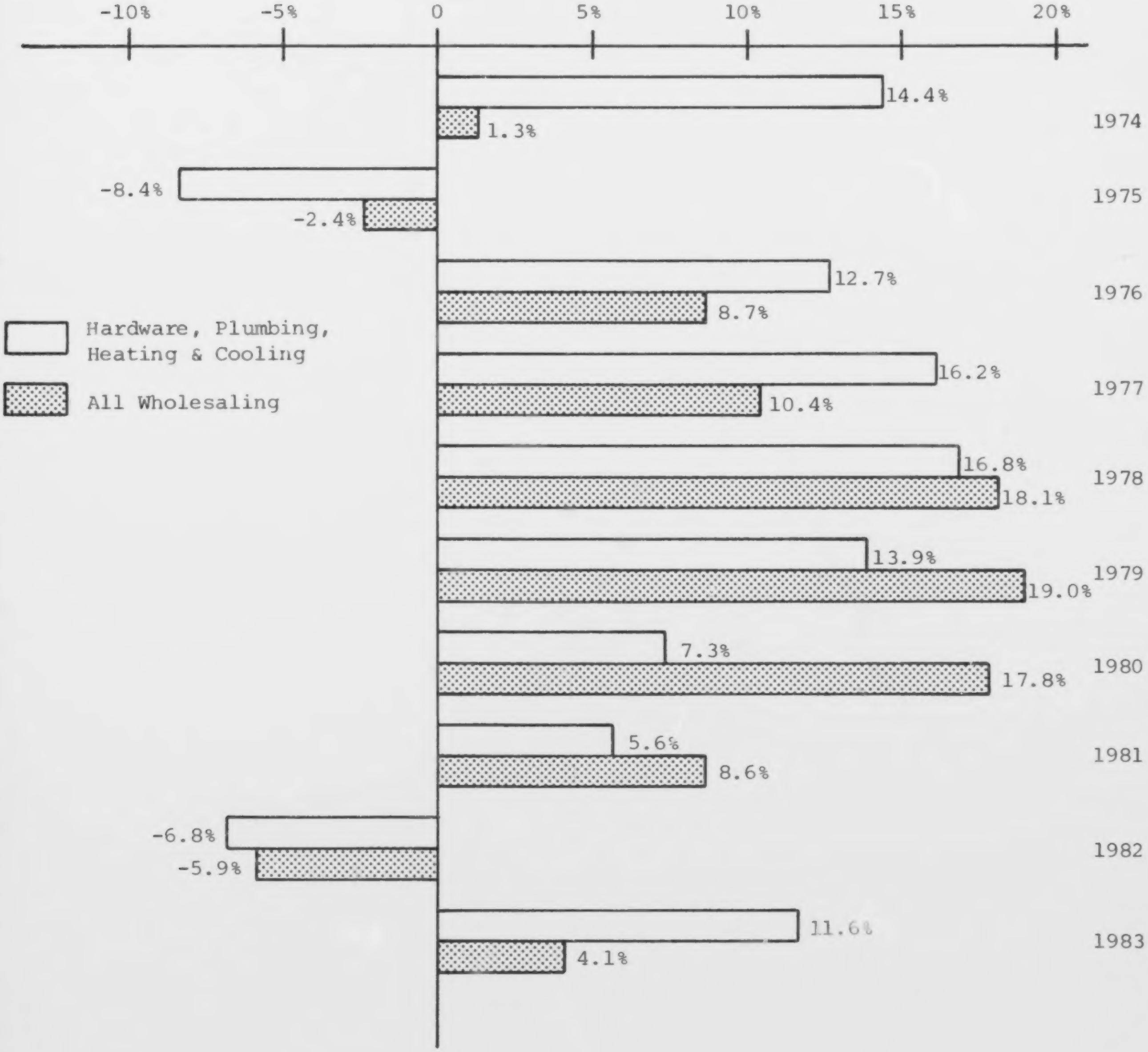


Exhibit 2
1983 Median Sales Growth

All P-H-C-P Wholesalers	10.5%
By Product Emphasis	
Plumbing Equipment and Supplies	18.1%
Industrial Pipes-Valves-Fittings (P-V-F)	(6.8)
Plumbing and Industrial P-V-F	12.7
HVAC and Other Emphasis	7.8
By Sales Volume	
Plumbing Equipment and Supplies:	
Sales Less Than $3 Million	9.5%
Sales $3 Million to $7 Million	18.8
Sales $7 Million to $12 Million	18.1
Sales Over $12 Million	22.8
Industrial P-V-F:	
Sales Less Than $4 Million	(13.6)%
Sales $ 4 Million to $12 Million	(4.2)
Sales Over $12 Million	(2.5)
Plumbing and Industrial P-V-F:	
Sales Less Than $3 Million	8.2%
Sales $3 Million to $7 Million	17.6
Sales Over $7 Million	9.2
HVAC and Other Emphasis:	
Sales Less Than $3 Million	2.4%
Sales $3 Million to $8 Million	9.2
Sales Over $8 Million	17.4

1983 Profitability Performance

P-H-C-P wholesaler profitability improved in 1983 along with sales. Typical return on net worth for all companies participating in the ASA survey was 6.3% in 1983, up from 3.8% in 1982. This was still below the 7.8% turned in in 1981. Plumbing equipment and supplies wholesalers had the highest return on net worth at 7.5% (see Exhibit 3) while industrial P-V-F companies displayed the lowest (3.3%).

There was no clear pattern of profitability by sales volume. Among plumbing wholesalers and those emphasizing HVAC and other products, the largest firms were most profitable in 1983. Among the other two types, the medium size companies showed the highest return on net worth. However, the largest firms did well in all groups except industrial P-V-F wholesalers.

Exhibit 3

1983 Median Return on Net Worth

All P-H-C-P Wholesalers	6.3%
By Product Emphasis	
Plumbing Equipment and Supplies	7.5%
Industrial Pipes-Valves-Fittings (P-V-F)	3.3
Plumbing and Industrial P-V-F	5.5
HVAC and Other Emphasis	5.9
By Sales Volume	
Plumbing Equipment and Supplies:	
Sales Less Than $3 Million	6.8%
Sales $3 Million to $7 Million	6.8
Sales $7 Million to $12 Million	8.1
Sales Over $12 Million	12.9
Industrial P-V-F:	
Sales Less Than $4 Million	1.6%
Sales $ 4 Million to $12 Million	4.8
Sales Over $12 Million	1.0
Plumbing and Industrial P-V-F:	
Sales Less Than $3 Million	1.7%
Sales $3 Million to $7 Million	6.6
Sales Over $7 Million	6.3
HVAC and Other Emphasis:	
Sales Less Than $3 Million	3.2%
Sales $3 Million to $8 Million	5.7
Sales Over $8 Million	6.9

P-H-C-P Wholesaling--1974 - 1983

Exhibit 4 indicates that other forms of durable goods wholesaling have enjoyed higher annual sales growth over the past ten years than hardware, plumbing, heating and cooling wholesalers. However, the latter grew only 1% per year slower than all durables wholesalers as a group, which is not a very significant difference.

Exhibit 4
Annual Wholesale Sales Growth
1974-1983

All Wholesale Trade	8.4%
All Durables Wholesalers	8.3
Electrical Goods	11.6
Motor Vehicles and Automotive Equipment	10.8
Furniture and Home Furnishings	9.2
Machinery, Equipment and Supplies	8.7
Hardware, Plumbing and Heating Equipment	7.3

The U.S. economy finally recovered in 1983. Gross National Product (GNP), the overall measure of the nation's production of goods and services, rose 3.4% in 1983 after adjustment for inflation. This compares to almost a 2% decrease in real GNP in 1982. The rapid growth of the economy has persisted in 1984 and continues to confound economists, whoe insist it must slow down.

Exhibit 5 charts changes in real GNP for the 1974-83 period. Since the figures have been adjusted for inflation, it is easy to see the recessions of 1974-75, 1980 and 1982, as well as the ensuring recoveries.

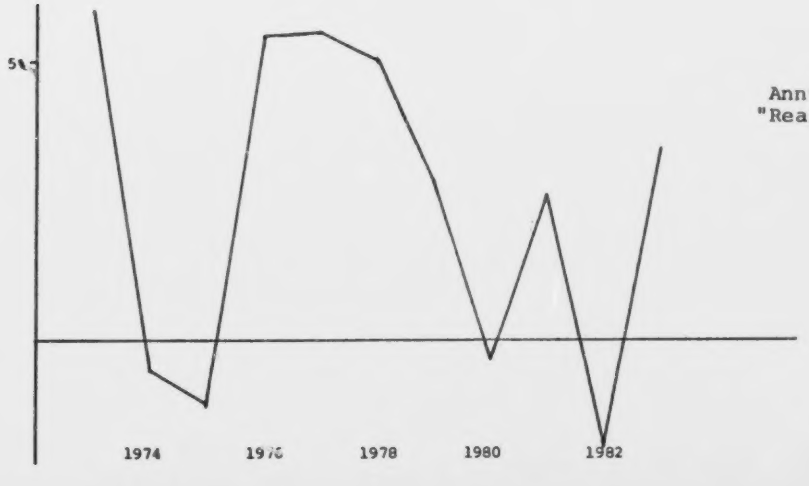


Exhibit 5

Annual Percent Change in
"Real" Gross National Product

Like GNP, if one wishes to observe the "real" changes in P-H-C-P wholesale sales over the years, the effects of inflation must be removed. This has been done in Exhibit 6. Adjusting for inflation provides a better view of:

- How bad 1975 and 1982 really were.

- That 1980 and 1981 were actually periods of negative real growth rather than reasonably good years as the non-deflated figures would seem to indicate.

- How good 1977, 1978 and 1983 were. However, one should keep in mind that 1983 looks perhaps better than it really was because it is being compared to low growth year (1982). Nevertheless, it is refreshing to note positive physical volume growth in 1983 compared to negative growth for the prior three years and a very small real increase in 1979.

The data presented in Exhibit 6 differ from that reported in the 1983 Operating Performance Report in two respects. First, the Census Bureau revised its estimates of 1982 sales upward. Second, a new series of price deflators has been used this year. To avoid confusion, the producer price index constructed by Alan Silver & Associates and regularly reported in The Wholesaler has been used to deflate all P-H-C-P sales data rather than the index used in last year's report. Therefore, all deflated sales figures will be different than those appearing in the 1983 report.

The annual percent change in the Silver Wholesaler Price Index for 1973 to 1983 appears in Exhibit 7. Inflation has moderated in the past several years, as it has in the entire economy. It is certainly a far cry from 1974, a year of 24.4% inflation due to the removal of price controls.

Exhibit 6
Growth of P-H-C-P Wholesale Sales
1974-1983

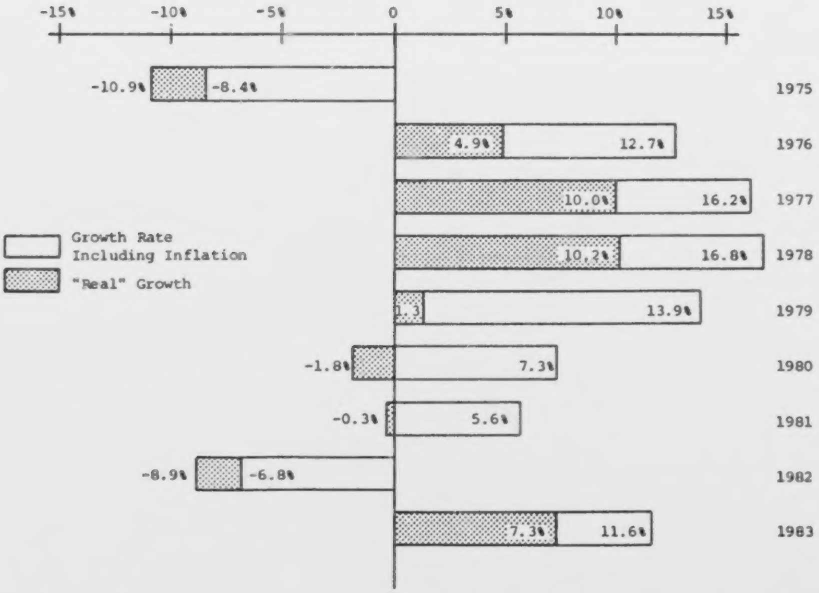
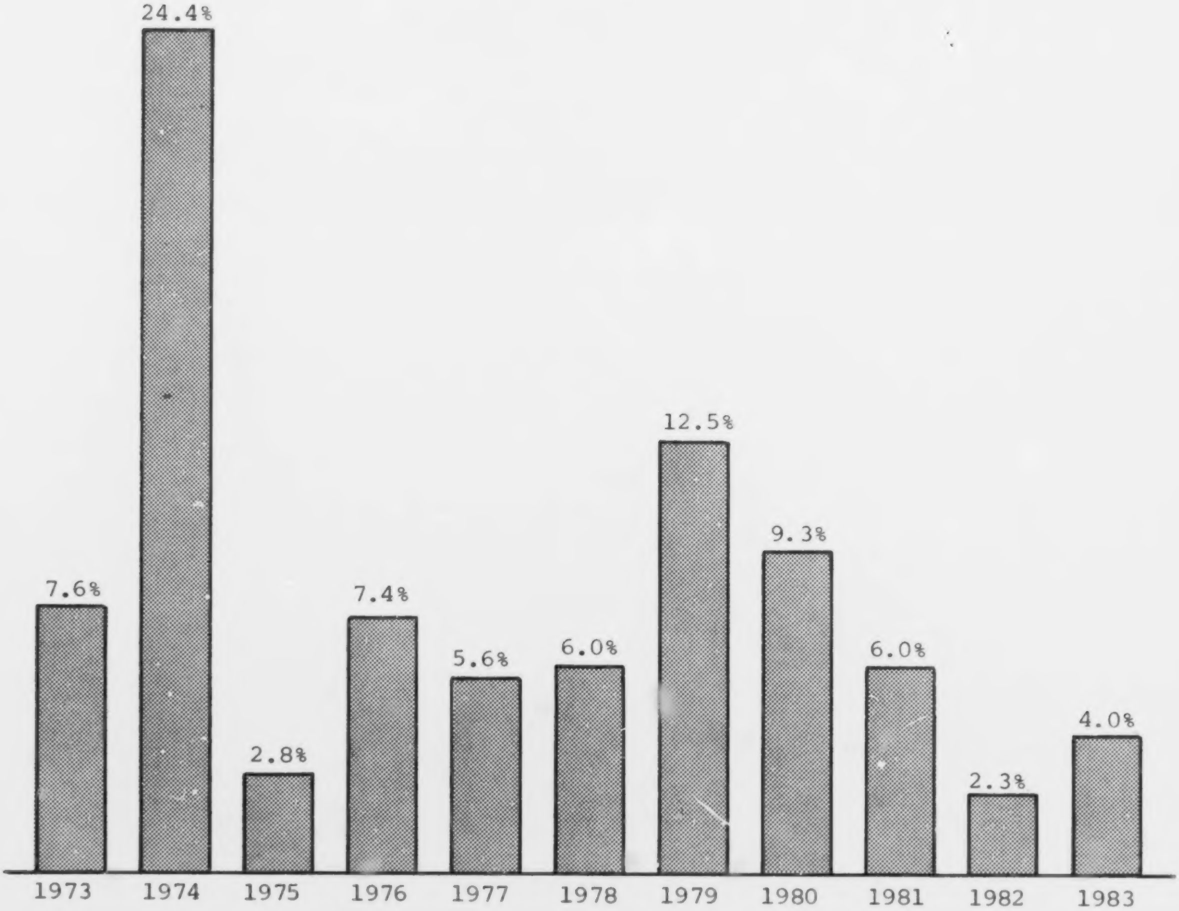


Exhibit 7

The P-H-C-P Wholesaler Price Index



Source: Alan Silver & Associates, Inc. and The Wholesaler.

How To Use This Report

The 1984 ASA Operating Performance Report of the P-H-C-P Wholesaler Industry has been designed to help P-H-C-P wholesalers evaluate their own performance relative to that of similar companies in order to identify improvement opportunities. The statistics in this report represent broad performance "yard-sticks" against which a company's performance can be measured.

Using this information P-H-C-P wholesalers can compare their own firm's financial and operating performance with the industry as a whole; with firms having the same areas of product emphasis; with firms of a comparable sales volume and/or geographic region; and with the highest profit firms. Spotting significant differences between your own firm's performance and the industry composites can be the first step toward improving performance. Keep in mind, however, that deviations from industry norms do not automatically call for some action on your part. The most important thing to do is to be able to explain why your firm experienced significant deviations from the "typical" wholesaler in the industry.

In order to obtain maximum advantage from the information contained in this report while at the same time minimizing your analysis time and effort, we recommend you follow the step-by-step approach outlined below.

Step 1: Collect the Necessary Company Data

The first step in using this report is to gather all your financial and operating results for your 1983 fiscal year. Most of the needed data can be obtained from your company accounting records, but a small amount will have to be extracted from other sources, such as personnel files, advertising records and the like. If you participated in the 1984 P-H-C-P wholesaler Operating Performance Survey, this step has probably already been done.

Step 2: Calculate the Ratios

The second step is to compute all of the various performance measures for your firm that are included in this report using the data gathered in Step 1. It is extremely important to calculate these ratios using the same formulas which were used to produce the ratios in this report. These formulas, along with sample calculations of each measure, appear in the section of this report entitled, "Ratio Definitions and Sample Calculations," located in the Appendix.

Companies which participated in the survey and filled the survey form out completely received, absolutely free, a confidential computer printout of their own firm's financial ratios calculated and formatted in a manner that is consistent with the information in this report. Thus, for those firms, Step 2 has already been completed for them in an accurate, time saving manner. P-H-C-P wholesalers that did not participate in the 1984 survey should strongly consider doing so in 1985.

Step 3: Compare the Results

Next, compare your company's performance with the survey results of other firms in the industry. As you do so, several points should be recognized:

(1) A deviation between your firm's figures (for any performance measure) and numbers in the report is not necessarily good or bad. It merely indicates that additional analysis may be required. As a rule, the larger the difference, the greater the need for further investigation.

(2) In situations where large deviations do exist, it may be helpful to go back and calculate the same performance measure over the past several years to identify any trends that may exist.

(3) The information in this report should be used as guidelines rather than absolute standards. Since firms differ as to their product emphasis strategy, location, size, and other factors, any two firms can be successful, yet have very different experiences with regard to certain performance measures.

Understanding the Data

In order to use the information in this report to maximum advantage, it is important to understand what the numbers mean and how to interpret them.

How The Tables Are Organized -- The tables in this report are organized to include a number of important financial ratios for each relevant "grouping" of similar firms. In particular, the major "groupings" used include:

- All Reporting Firms -- refers to the results of all firms responding to the survey.

- Product Emphasis Group:

  -- Plumbing Supplies & Equipment Firms -- those firms that derive over 50% of sales from plumbing products.

  -- Industrial P-V-F Firms -- those firms that derive over 50% of sales from Industrial P-V-F products.

  -- Plumbing Supplies & Equipment and Industrial P-V-F Firms -- those firms that derive more than 50°% of sales from plumbing and industrial P-V-F products combined but less than 50% from either category alone.

  -- HVAC & Other Emphasis Firms -- those firms that cannot be classified in any of the above three groups; or those companies that derive less than 50% of sales from combined plumbing supplies and equipment, and industrial P-V-F.

- Product Emphasis Group by Sales Volume Size:

  - Plumbing Supplies and Equipment Firms with Sales Under $3 Million
  - Plumbing Supplies and Equipment Firms with Sales $3-7 Million
  - Plumbing Supplies and Equipment Firms with Sales $7-12 Million
  - Plumbing Supplies and Equipment Firms with Sales Over $12 Million

  - Industrial P-V-F Firms with Sales Under $4 Million
  - Industrial P-V-F Firms with Sales $4-12 Million
  - Industrial P-V-F Firms with Sales Over $12 Million

  - Plumbing Supplies & Equipment and Industrial P-V-F Firms with Sales Under $3 Million
  - Plumbing Supplies & Equipment and Industrial P-V-F Firms with Sales $3-7 Million
  - Plumbing Supplies & Equipment and Industrial P-V-F Firms with Sales Over $7 Million

  - HVAC & Other Emphasis Firms with Sales Under $3 Million
  - HVAC & Other Emphasis Firms with Sales $3-8 Million
  - HVAC & Other Emphasis Firms with Sales Over $8 Million

- By Geographic Region:

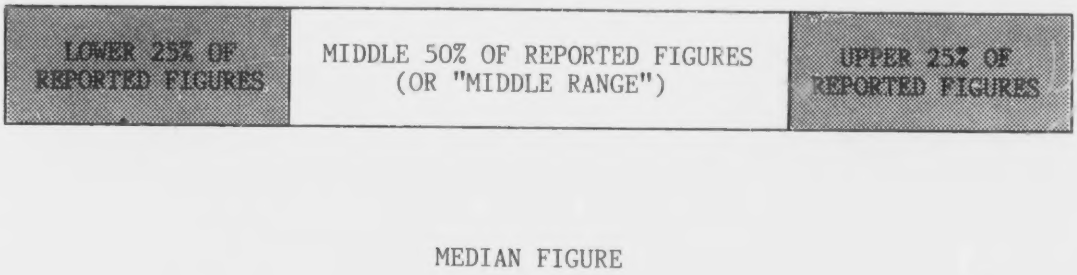
  - New England (CT, ME, MA, NH, RI, VT)
  - New York (excluding NYC)
  - Long Island and Metro NYC (however, data was insufficient to include ratios in this report)
  - Middle Atlantic (DE, Eastern PA, MD, NJ, DC)
  - East Central (IN, OH, Western PA, WV)
  - Southern (AL, FL, GA, KY, MS, NC SC, TN, VA)
  - Michigan (excluding Upper MI)
  - Metro Chicago and Northern IL
  - Mid-America (IA, Southern IL, KS, MN, MO, NE, ND, SD, Upper MI, WI)
  - Louisiana, Texas, New Mexico, Oklahoma and Arkansas
  - Rocky Mountain (CO, ID, MT, UT, WY)
  - Pacific Northwest (AK, OR, WA)
  - Northern California, Northern Nevada, and Hawaii
  - Pacific Southwest (AZ, Southern CA, Southern NV)

- By Product Emphasis Group by High Profit Firms:

  - High Profit Plumbing Supplies & Equipment Firms
  - High Profit Industrial P-V-F Firms
  - High Profit Plumbing Supplies & Equipment and Industrial P-V-F Firms
  - High Profit HVAC & Other Emphasis Firms

Interpreting the Numbers -- Most of the performance indicators included in this study are reported on the basis of medians rather than arithmetical averages or means. Unlike the mean, the median is not distorted by a few unusually high or low values that may exist in the sample due to special circumstances. The "median" figure represents the mid-point of the figures for a particular measure, with one-half of the firms reporting figures above it and one-half below. Each median was independently selected from its own array of figures. As a result, component figures of an item may not necessarily total 100 percent and normal mathematical relationships do not always exist. For example, the median net sales minus the median cost of goods sold may not necessarily equal the median gross margin percent.

Also included for most of the performance indicators is the "Middle Range." This represents the experience of the middle 50 percent of all firms in the data grouping when items are arranged numerically from lowest to highest. In other words, the upper and lower limits on the "Middle Range" are simply the upper and lower quartiles respectively for that ratio.


LOWER 25% OF REPORTED FIGURES
MIDDLE 50% OF REPORTED FIGURES (OR "MIDDLE RANGE")
UPPER 25% OF REPORTED FIGURES
MEDIAN FIGURE

Further insights into how to use this report are included in the Appendix in the section entitled: "Ratio Definitions and Sample Calculations." An important point to keep in mind when using this report is that even relatively simple analysis of your company's own financials using the industry data for comparison, can yield important insights into your business. You do not have to be a financial expert to benefit from this information.

1984 ASA OPERATING
PERFORMANCE SURVEY
DETAILED RESULTS

Executive Summary of Survey Results

The detailed results of the 1984 ASA Operating Performance Survey of the P-H-C-P Wholesaler Industry (pages 31 through 151 of this report) provide an in-depth view of performance levels, financial position and operating characteristics experienced in 1983. This section of the report summarizes and highlights some of the important findings of the overall study. In particular, the information which appears on the following few pages has been abstracted from the much more comprehensive set of statistics which follow in the report. Those performance measures contained in this section of the report are good overall gauges of P-H-C-P wholesaler experiences in 1983.

1981-1983 Performance Comparison

One of the most important features of each year's ASA Operating Performance Report of the P-H-C-P Wholesaler Industry is to report industry trend data on a regular basis. This year's study shows important shifts that have occurred in P-H-C-P wholesaler performance over the 1981-1983 period. During this interval the industry, along with the economy in general, has gone from a period of great financial difficulty due to severe recessionary pressures to a period of rapid recovery and strong expansion. Exhibit 8 reflects the impact of this business cycle swing on the financial condition of the industry based on a number of key performance indicators.

Productivity Management--One important gauge of industry performance is productivity. For most companies, productivity is a key determinant of profitability, regardless of economic conditions.

Exhibit 8 shows the three year pattern of productivity performance for the key management areas of personnel and inventory. In particular, a number of observations are noteworthy:

- In general, personnel productivity as measured by net sales per employee showed a strong rebound in 1983 versus 1982. This is reflected by the "All Reporting Firms" grouping which shows $167,380 in net sales per employee in 1983 versus only $152,258 in 1982. However, the 1983 performance is only slightly above the $162,040 level reached in 1981, and is even less significant if the effects of inflation are considered.

- Payroll and fringe benefits expense as a percentage of net sales declined somewhat in 1983 versus 1982 (in the aggregate for all industry firms), returning to 1981 levels. Among the various product emphasis groups this pattern held true for "Plumbing Supplies and Equipment Firms" as well as "Plumbing Supplies and Equipment and Industrial P-V-F Firms." However, "Industrial P-V-F Firms" reported a steady increase in payroll and fringe benefits expenses relative to sales over the 1981-83 period, while "HVAC & Other Emphasis Firms" showed a steady decline.

EXHIBIT 8
P-H-C-P WHOLESALERS THREE-YEAR
SUMMARY PERFORMANCE COMPARISON
1981-1983

	Plumbing Supplies & Equipment Firms			Industrial P-V-F Firms			Plumbing Supplies & Equipment & Industrial P-V-F Firms			HVAC & Other Emphasis Firms			All Reporting Firms		
	1983	1982	1981	1983	1982	1981	1983	1982	1981	1983	1982	1981	1983	1982	1981
Financial Management															
Total Debt to Net Worth	85.8%	68.9%	78.1%	83.9%	83.3%	64.2%	56.7%	42.5%	52.3%	87.1%	92.7%	102.1%	78.4%	68.3%	74.1%
Current Assets Minus Inventory to Current Debt	1.0x	1.3x	1.1x	1.1x	1.2x	1.0x	1.4x	1.5x	1.4x	1.0x	1.1x	1.0x	1.1x	1.3x	1.1x
Personnel Productivity															
Net Sales per Employee	$171,166	$158,548	$162,470	$196,923	$201,377	$198,150	$167,513	$152,807	$157,900	$144,910	$135,715	$133,470	$167,380	$152,258	$162,040
Payroll and Fringe Benefits to Net Sales	13.7%	14.1%	13.8%	14.1%	13.9%	12.9%	14.3%	15.3%	14.2%	14.3%	15.1%	15.6%	14.1%	14.5%	14.1%
Inventory Management															
Gross Margin on Sales	24.3%	25.0%	24.4%	24.4%	23.4%	25.1%	24.1%	25.2%	24.5%	26.2%	26.1%	26.1%	24.8%	25.0%	24.7%
Cost of Warehouse Goods Sold to Average Inventory	3.7x	3.3x	3.5x	3.1x	2.7x	3.0x	3.4x	2.8x	3.1x	2.8x	3.3x	3.1x	3.3x	3.1x	3.4x
Total Cost of Goods Sold to Average Inventory	4.1x	3.7x	4.2x	3.6x	3.7x	3.4x	4.0x	3.6x	3.9x	3.4x	3.4x	3.5x	3.8x	3.6x	3.8x
Warehouse Gross Margin Return on Inventory	124%	113%	217%	109%	95%	111%	108%	106%	114%	102%	111%	118%	114%	109%	119%
Accounts Receivable															
Average Collection Period (Days)	50	50	44	51	40	40	49	46	47	49	50	43	50	47	44
Expense Management															
Total Operating Expenses as a Percent of Sales	21.8%	22.7%	21.6%	23.6%	22.0%	20.6%	22.7%	24.7%	21.2%	23.5%	25.1%	23.5%	22.4%	23.2%	21.7%
Sales Performance															
Percent Sales Change from Prior Year	18.1%	-3.1%	0.5%	-6.8%	-11.7%	3.6%	12.7%	-3.7%	2.8%	7.8%	-3.7%	-0.8%	10.5%	-4.3%	0.9%

- Inventory productivity also showed a cyclical pattern during 1981-83. Warehouse Gross Margin Return on Inventory dropped from 119% in 1981 to 109% in 1982, but rebounded to 114% in 1983.

  "Warehouse gross margin return on inventory" provides a good measure of overall inventory productivity because it combines the two critical components of effective inventory management: gross margin and inventory turnover. Since "warehouse gross margin return on inventory" is derived by dividing gross profit on warehouse sales by average inventory, an increase in either gross margin or turnover will result in improvement. Likewise, a decline in either will have the opposite effect.

Accounts Receivable--Another important performance indicator shown in Exhibit 8 is "average collection period," which shows how long money in the business is tied up in credit sales. Given the high cost of borrowing money that exists today, receivables that are outstanding for long periods of time can be a significant drain on company profits.

For example, if your firm typically carries $50,000 in receivables on the books each month, this is probably costing you somewhere around $750 per month just in interest alone (at 1.5% per month). While extending credit to customers is obviously an important part of doing business, striving to effectively manage receivables can be critically important to profitability. Some tips to follow include:

- Be sure to bill your customers as soon as possible after completing a sales transaction. Getting behind in your billings results in receivables that may not even show up on the books, but which are costly.
- Encourage customers to pay quickly. Possibly offer early payment discounts.
- To the extent possible, assess interest charges for late paying accounts.
- Send regular past due notices to slow paying accounts and follow up with phone calls to appropriate individuals.
- Most importantly, be aware of what your receivables are costing you, especially the slow paying accounts.

Unfortunately, the typical P-H-C-P wholesaler experienced a slight deterioration in receivables management over the 1981-83 period. Average collection period went from 44 days in 1981 to 47 in 1982 to 50 in 1983 (based on "All Reporting Firms"). While this pattern largely reflects the situation that has existed in the overall economy, some concern is warranted that the uptrend does not continue.

As a further insight into this important area of receivables management, last year's ASA Operating Performance Report introduced a new feature which shows industry comparative accounts receivable aging information. This data, which has been again compiled in this year's report, shows the percentage of total receivables that are:

- Current
- 1-30 days past due
- 31-60 days past due
- 61-90 days past due
- Over 90 days past due

Exhibit 9 summarizes some of the accounts receivable aging information that is contained in more detail throughout the statistical tables portion of this report. As shown, the typical P-H-C-P wholesaler in 1983 had 63.9% of total accounts receivable dollars that were current while the remainder were varying degrees of being past due.

Financial Management--The primary elements of financial management typically include: leverage and liquidity. Leverage refers to the use of creditors funds (debt) to finance a portion of the business. Liquidity refers to your firm's ability to pay its bills.

Exhibit 8 shows the 1981-83 trend in "total debt to net worth," one commonly used measure of leverage. This measure indicates the relative portion of debt versus equity financing. As shown, while the use of debt tended to decline somewhat in 1982 as compared to 1981 (for "All Reporting Firms"), this increased again in 1983.

Liquidity essentially refers to the short term financial strength of the firm. One good indicator is the "quick" or "acid-test" ratio (defined as current assets minus inventory divided by current liabilities). By excluding inventory, this ratio considers only those assets which can be rapidly converted to cash and whose values are relatively certain. Based on the "quick ratio," liquidity for the typical P-H-C-P wholesaler tended to remain fairly stable between 1981 and 1983.

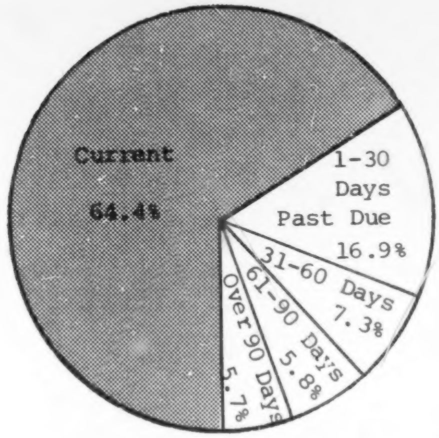
Expense Management--Included throughout the detailed statistical portion of this report are 1983 percentage income statements which show, among other things, various operating expense categories as a percentage of sales. As a summary of P-H-C-P expense management over the 1981-83 period, Exhibit 8 shows total operating expenses as a percentage of sales. There it is seen that while operating expenses relative to sales increased significantly in 1983, better control prevailed in 1983.

Sales Performance--The last line of Exhibit 8 shows the 1981-83 trend in industry sales performance, perhaps the most commonly cited barometer of business conditions. The strength of the 1983 economic recovery is reflected in the strong sales gains reported for the "All Reporting Firms" category. After sales declined by 4.3% in 1982 versus 1981, P-H-C-P wholesalers grew 10.5% in 1983. Among the various product specialty groups, "Plumbing Supplies and Equipment Firms" reported the highest sales increases with a whopping 18.1% 1983 gain. The category of "Plumbing Supplies and Equipment and Industrial P-V-F Firms" was second with a 12.7% sales increase. "HVAC and Other Emphasis Firms" reported a 7.8% gain, but the "Industrial P-V-F" group declined 6.8%.

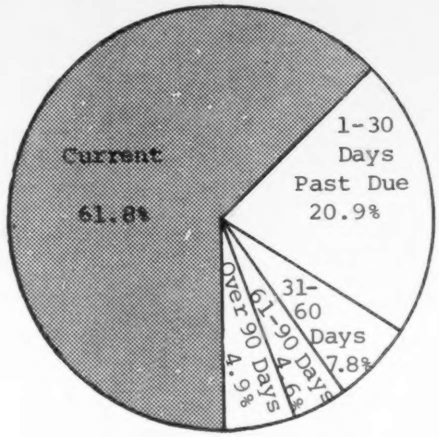
Exhibit 9

ACCOUNTS RECEIVABLE AGING -- 1983

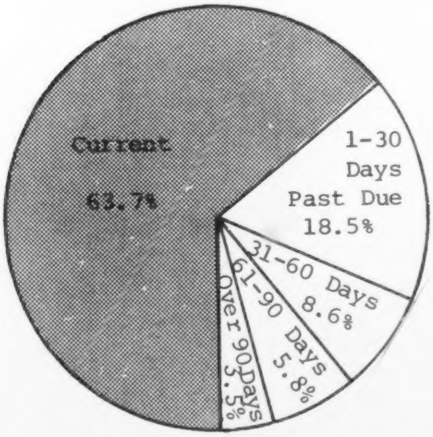
(Percentage of Accounts Receivable Dollars Current and Past Due)



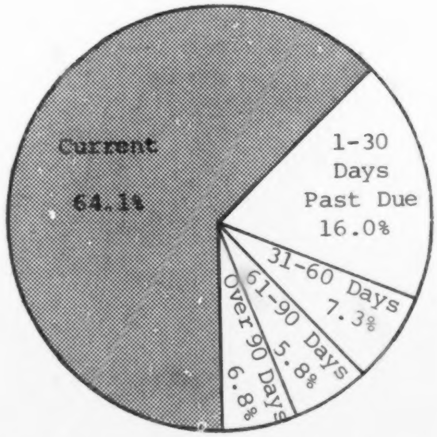
PLUMBING SUPPLIES & EQUIPMENT FIRMS



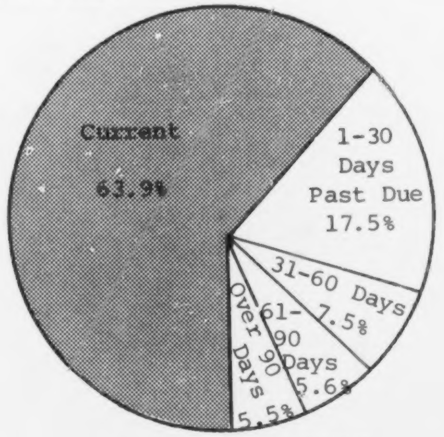
INDUSTRIAL P-V-F FIRMS



PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS



HVAC & OTHER EMPHASIS FIRMS



ALL REPORTING FIRMS

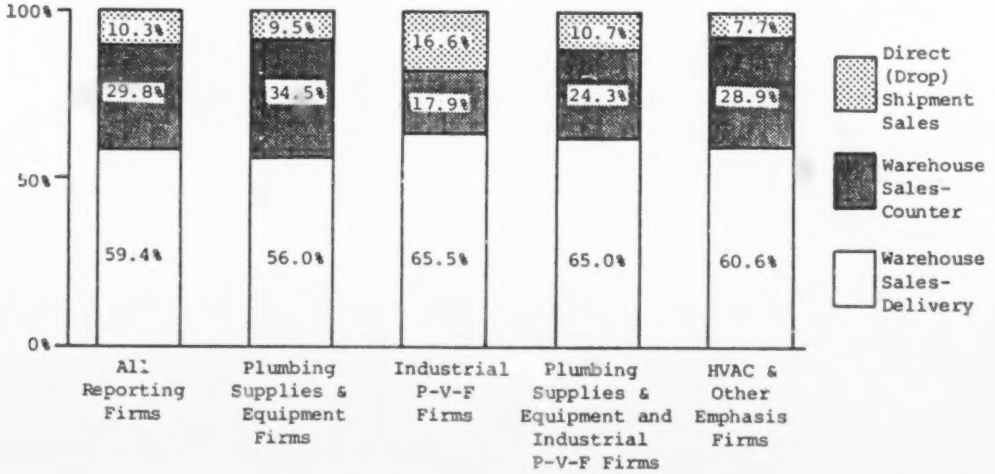
Additional insights into 1983 industry sales are provided by the exhibit shown below which shows the mix of sales by type of sales transaction as well as the product mix of sales. Not surprisingly, most sales (nearly 60%) are warehouse delivery sales while direct or drop shipment sales represent only about 10% of the total for the industry. Also, by definition, the product mix of sales varies greatly by type of product emphasis group.

Exhibit 10

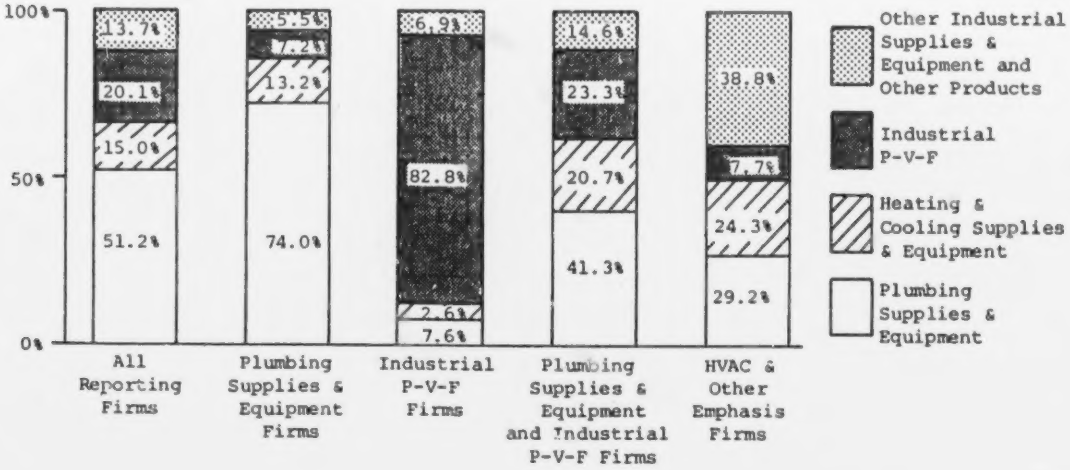
ANALYSIS OF 1983 P-H-C-P

WHOLESALER SALES

SALES MIX -- Percent of Total Sales



PRODUCT MIX -- Percent of Total Sales



1983 vs. 1982 Profitability Comparison

Probably the best overall indicator of P-H-C-P wholesaler performance is provided by the Strategic Profit Model, which is shown in Exhibit 11 for 1983 versus 1982.

Essentially, the Strategic Profit Model summarizes financial performance by highlighting its key components: margin management, asset management and financial policy management. As shown in Exhibit 11, return on net worth, which is the ultimate measure of a firm's profitability, is determined by the combination of each of the three "profit pathways."

- Profit Margin refers to net profit (after tax) divided by net sales. It is a good measure of margin management because in order to achieve an acceptable net profit margin, a company must earn an acceptable gross margin while keeping expenses in line.

- Asset Turnover depicts net sales divided by total assets. This is an overall measure of asset management, showing how many dollars in sales are being generated by each dollar of assets employed in running the business.

- Financial Leverage is derived from total assets divided by net worth. Financial leverage is nothing more than the degree to which debt is used to finance the business as opposed to net worth (owner's investment).

Since the above three components multiply together to yield return on net worth, increases in any of these three components increases the overall profitability of the firm. Unfortunately, the opposite is also true.

Based upon the various profit models shown in Exhibit 11, several general statements are noteworthy:

- Overall, 1983 was a more profitable year for P-H-C-P wholesalers than was 1982. Return on net worth improved for the industry as a whole (from 3.8% in 1982 to 6.3% in 1983) as well as for three out of the four product emphasis groups shown.

- The most profitable group was "Plumbing Supplies and Equipment Firms," which posted a 7.5% 1983 return on net worth, due largely to a strong combination of both high profit margins and high asset turnover.

- The lowest profitability (3.3%) as measured by return on net worth, was recorded by "Industrial P-V-F Firms."

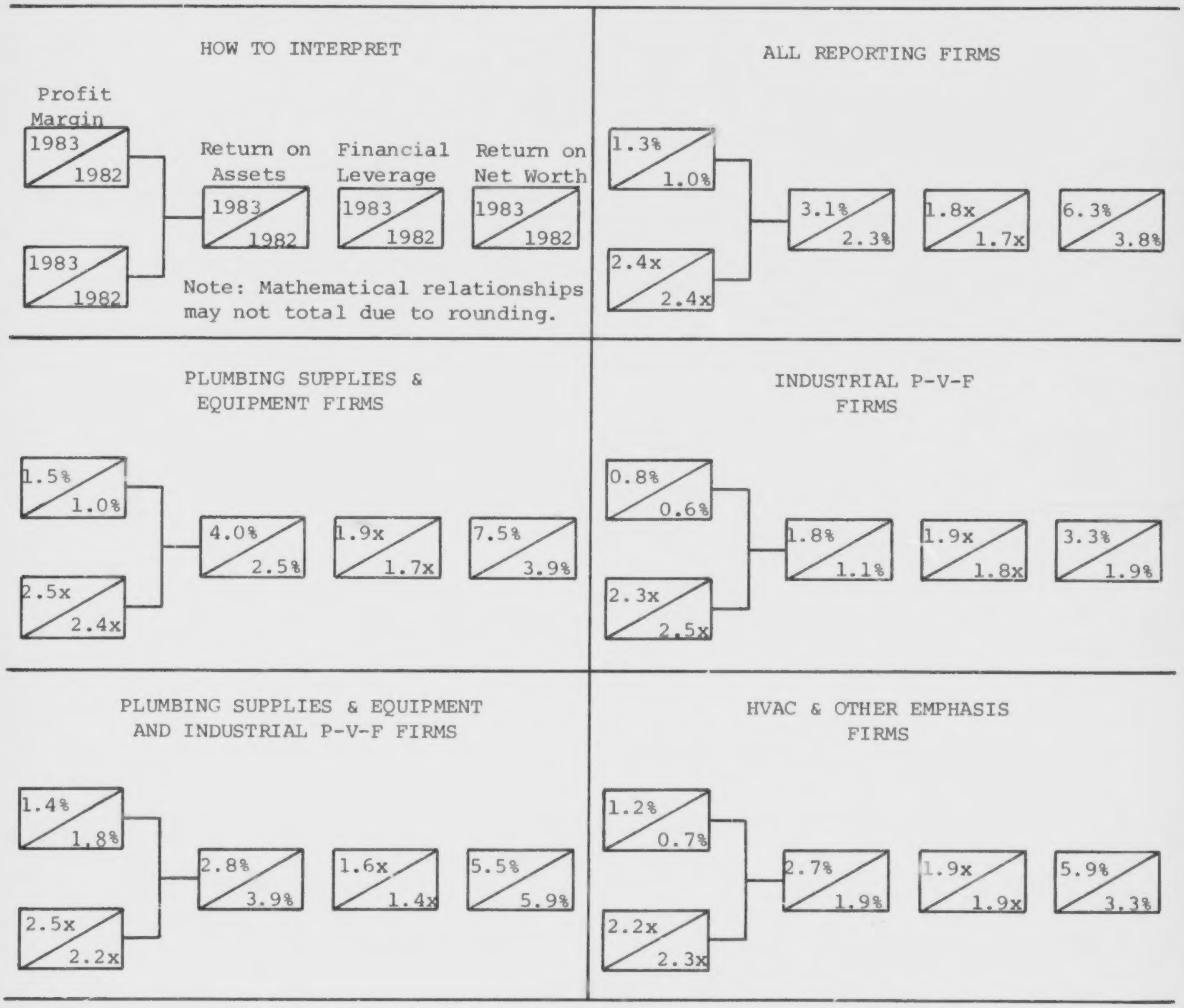
High Profit Firms vs. The "Typical" Firm

Further insight into industry performance is evident from the statistics included in this report for "high profit" firms. Essentially, this refers to a special data grouping of the most profitable companies (on the basis of before tax return on assets). Since high profitability is a primary goal of most P-H-C-P wholesalers, it is extremely critical to understand what characterizes profitable firms. Exhibit 12 summarizes some of the key indicators by showing the performance results of the high profit firms as compared to the "typical" or industry median. In particular:

Exhibit 11

P-H-C-P WHOLESALER TWO-YEAR STRATEGIC PROFIT MODEL RATIOS

1983 vs. 1982


HOW TO INTERPRET
Profit Margin
1983
1982
1983
1982
Return on Assets
1983
1982
Financial Leverage
1983
1982
Return on Net Worth
1983
1982
ALL REPORTING FIRMS
1.3%
1.0%
2.4x
2.4x
3.1%
2.3%
1.8x
1.7x
6.3%
3.8%
PLUMBING SUPPLIES & EQUIPMENT FIRMS
1.5%
1.0%
2.5x
2.4x
4.0%
2.5%
1.9x
1.7x
7.5%
3.9%
INDUSTRIAL P-V-F FIRMS
0.8%
0.6%
2.3x
2.5x
1.8%
1.1%
1.9x
1.8x
3.3%
1.9%
PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS
1.4%
1.8%
2.5x
2.2x
2.8%
3.9%
1.6x
1.4x
5.5%
5.9%
HVAC & OTHER EMPHASIS FIRMS
1.2%
0.7%
2.2x
2.3x
2.7%
1.9%
1.9x
1.9x
5.9%
3.3%

Note: Mathematical relationships may not total due to rounding.

- High profit firms tended also to be the most productive. Net sales per employee was higher; warehouse gross margin return on average inventory was higher; average collection period was somewhat lower; and operating expenses as a percentage of sales were lower. These patterns were true regardless of type of company, thus suggesting that one important component of profitability is high productivity.

- Regardless of company product emphasis, the high profit firms experienced more rapid 1983 sales growth than the "typical" company.

- High profit firms experienced much higher profit margins than the industry median, largly reflecting a better job in controlling expenses relative to sales.

EXHIBIT 12
SUMMARY PERFORMANCE COMPARISON --
HIGH PROFIT FIRMS VS. "TYPICAL FIRM"
P-H-C-P WHOLESALERS 1983

	Plumbing Supplies & Equipment Firms		Industrial P-V-F Firms		Plumbing Supplies & Equipment & Industrial P-V-F Firms		HVAC & Other Emphasis Firms		All Reporting Firms
	Typical	High Profit	Typical	High Profit	Typical	High Profit	Typical	High Profit	
Profitability									
Net Profit (After Tax) to Total Assets	4.0%	6.2%	1.8%	3.3%	2.8%	6.1%	2.7%	5.7%	3.1%
Net Profit (After Tax) to Net Worth	7.5%	12.0%	3.3%	6.7%	5.5%	10.0%	5.9%	10.8%	6.3%
Net Profit (After Tax) to Net Sales	1.5%	2.6%	0.8%	1.3%	1.4%	2.6%	1.2%	2.7%	1.3%
Asset and Financial Management									
Net Sales to Total Assets	2.5x	2.6x	2.3x	2.3x	2.5x	2.7x	2.2x	2.2x	2.4x
Total Debt to Net Worth	85.8%	72.2%	83.9%	67.6%	56.7%	51.4%	87.1%	86.7%	78.4%
Current Assets to Current Debt	2.3x	2.6x	2.3x	3.0x	3.0x	3.0x	2.6x	2.8x	2.6x
Personnel Productivity									
Net Sales per Employee	$171,166	$183,688	$196,923	$200,213	$167,513	$192.086	$144,910	$150,018	$167,380
Payroll and Fringe Benefits to Net Sales	13.7%	13.0%	14.1%	14.8%	14.3%	14.8%	14.3%	14.3%	14.1%
Inventory Management									
Gross Margin on Net Sales	24.3%	23.6%	24.4%	26.3%	24.1%	24.0%	26.2%	27.4%	24.8%
Gross Margin on Direct Shipments	10.9%	10.6%	11.6%	10.2%	11.7%	10.9%	14.0%	12.0%	11.6%
Gross Margin on Warehouse Sales	25.4%	24.7%	26.1%	27.0%	24.4%	25.0%	26.1%	27.5%	25.6%
Cost of Warehouse Goods Sold to Average Inventory	3.7x	4.2x	3.1x	2.7x	3.4x	4.9x	2.8x	3.3x	3.3x
Total Cost of Goods Sold to Average Inventory	4.1x	4.9x	3.6x	3.2x	4.0x	6.0x	3.4x	3.5x	3.8x
Warehouse Gross Margin Return on Average Inventory	124%	138%	109%	114%	108%	138%	102%	118%	114%
Accounts Receivable									
Average Collection Period (Days)	50	49	51	52	49	55	49	46	50
Operating Expenses (% of Net Sales)									
Selling Expenses	5.6%	5.4%	7.8%	7.8%	6.0%	6.0%	7.2%	5.6%	6.1%
Delivery Expenses	1.8%	1.5%	1.6%	1.5%	1.7%	1.7%	1.8%	1.7%	1.7%
Warehouse Expenses	2.4%	2.1%	2.6%	2.5%	2.6%	2.8%	2.3%	2.3%	2.5%
General & Administrative Expenses	8.5%	7.7%	9.1%	8.9%	8.1%	7.8%	9.2%	9.8%	8.8%
Occupancy Expenses	1.8%	1.6%	1.6%	1.5%	2.1%	2.2%	1.8%	1.6%	1.8%
Total Operating Expenses	21.8%	20.0%	23.6%	22.8%	22.7%	20.9%	23.5%	22.9%	22.4%
Sales Performance									
Percent Sales Change from Prior Year	18.1%	20.8%	-6.8%	-4.4%	12.7%	16.6%	7.8%	16.8%	10.5%

Plumbing Supplies & Equipment Firms

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	7.45%	2.72 - 12.87%
Total Assets to Net Worth	1.86X	1.46 - 2.89X
Net Profit After Tax to Total Assets	3.95%	1.59 - 6.17%
Net Sales to Total Assets	2.45X	2.03 - 2.89X
Net Profit After Tax to Net Sales	1.50%	0.70 - 2.60%
Net Profit Before Tax to Total Assets	4.98%	2.07 - 9.06%
EBIT to Total Assets	6.94%	4.81 - 11.43%
SALES ANALYSIS		
Net Sales($000)	$4,208	$2,811 - 8,679
Percent Sales Change from Prior Year	18.05%	5.16 - 27.24%
Sales Mix:		
Direct Sales	9.5%	4.0 - 13.9%
Warehouse Sales - Counter	34.5%	15.0 - 47.0%
Warehouse Sales - Delivery	56.0%	46.0 - 77.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	74.0%	60.0 - 86.0%
Heating & Cooling Supplies & Equipment	13.2%	0.8 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.2%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.5%	0.0 - 2.0%
Other Products	4.0%	0.0 - 3.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.3%	21.4 - 26.7%
Gross Margin on Direct Shipments	10.9%	8.0 - 15.3%
Gross Margin on Warehouse Sales	25.4%	22.6 - 27.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.80X	2.30 - 3.32X
Total Debt to Net Worth	85.8%	45.6 - 181.1%
Current Debt to Net Worth	69.7%	34.0 - 129.7%
Current Assets to Current Debt	2.34X	1.72 - 3.53X
Current Assets Minus Inventory/Curr Debt	1.02X	0.74 - 1.50X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$133	$107 - 201
Average Billing Line	$25.22	$16.69 - 34.81

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$171,166	$139,924 - 198,884
Gross Margin Per Employee	$40,483	$34,655 - 47,436
Average Compensation Per Employee	$19,647	$17,826 - 22,998
Average Fringe Benefits Per Employee	$3,623	$2,425 - 4,897
Compensation & Fringes Per Employee	$23,436	$20,696 - 27,032
Payroll to Net Sales	11.7%	10.3 - 13.4%
Fringe Benefits to Net Sales	2.1%	1.5 - 2.8%
Payroll & Fringes to Net Sales	13.7%	11.6 - 16.0%
Payroll to Gross Margin	48.9%	44.6 - 54.0%
Fringe Benefits to Gross Margin	8.4%	6.7 - 11.4%
Payroll & Fringes to Gross Margin	57.4%	52.0 - 63.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.66X	2.62 - 4.78X
No. of Days Average Inventory Carried	100 Days	76 - 140 Days
Total Cost of Goods Sold to Ave Inventory	4.11X	3.05 - 5.35X
Whse Gross Margin Return on Ave Inventory	124%	91 - 161%
Turn & Earn Profitability Index	92%	65 - 122%
Percent of Firms on LIFO	48.92%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	45 - 60 Days
Gross Margin Return on Receivables	176%	139 - 209%
Aging of Receivable Dollars:		
Current	64.4%	55.1 - 73.3%
1-30 Days Past Due	16.9%	12.8 - 22.0%
31-60 Days Past Due	7.3%	3.9 - 9.6%
61-90 Days Past Due	5.8%	2.0 - 7.5%
Over 90 Days Past Due	5.7%	0.0 - 8.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,180	$752 - 1,568
1-30 Days Past Due	$1,098	$670 - 2,253
31-60 Days Past Due	$1,026	$628 - 1,923
61-90 Days Past Due	$1,143	$619 - 2,026
Over 90 Days Past Due	$1,539	$911 - 2,654
Total	$1,201	$804 - 1,631
Aging of Receivable Accounts:		
Current	67.2%	59.6 - 76.8%
1-30 Days Past Due	16.4%	9.7 - 21.3%
31-60 Days Past Due	7.3%	4.4 - 9.2%
61-90 Days Past Due	5.2%	2.2 - 7.0%
Over 90 Days Past Due	4.0%	0.1 - 6.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.0%	73.3 - 78.6%
Gross Margin	24.3%	21.4 - 26.7%
Operating Expenses:		
Selling Expenses	5.6%	4.6 - 7.2%
Delivery Expenses	1.8%	1.3 - 2.5%
Warehouse Expenses	2.4%	1.7 - 3.6%
General & Administrative Expenses	8.5%	6.7 - 10.7%
Occupancy Expenses	1.8%	1.4 - 2.7%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	21.8%	19.5 - 24.6%
Net Operating Profit	2.1%	0.8 - 3.6%
Non-Operating Income	2.2%	1.3 - 2.7%
Non-Operating Expenses	1.9%	1.1 - 2.8%
Net Profit Before Tax	2.0%	0.9 - 3.8%
Net Profit After Tax	1.5%	0.7 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.8%	19.5 - 24.6%
Total Operating Expense to Gross Margin	90.8%	84.7 - 96.4%
Non-People Expense to Net Sales	7.7%	5.8 - 9.7%
Non-People Expense to Gross Margin	32.9%	26.0 - 38.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.3 - 1.5%
Times Interest Earned	3.0X	1.5 - 7.1X
BALANCE SHEET		
Cash	4.9%	0.9 - 7.7%
Accounts & Notes Receivable, Trade(Net)	31.5%	23.5 - 38.3%
Inventory	48.5%	40.8 - 58.3%
Other Current Assets	2.1%	0.2 - 1.8%
Total Current Assets	86.1%	81.5 - 94.9%
All Other Assets	13.0%	5.1 - 18.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.2%	25.3 - 49.7%
Total Long-Term Liabilities	9.9%	0.5 - 14.3%
Total Liabilities	50.1%	34.4 - 67.7%
Total Net Worth	49.9%	32.3 - 65.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.80%	1.77 - 9.55%
Total Assets to Net Worth	1.52X	1.31 - 2.10X
Net Profit After Tax to Total Assets	4.53%	0.89 - 6.27%
Net Sales to Total Assets	2.29X	1.72 - 2.74X
Net Profit After Tax to Net Sales	1.80%	0.50 - 2.90%
Net Profit Before Tax to Total Assets	5.59%	1.15 - 7.90%
EBIT to Total Assets	6.45%	2.14 - 9.65%
SALES ANALYSIS		
Net Sales ($000)	$1,848	$1,249 - 2,411
Percent Sales Change from Prior Year	9.51%	-0.01 - 23.08%
Sales Mix:		
Direct Sales	6.6%	0.0 - 10.1%
Warehouse Sales - Counter	43.6%	15.1 - 76.2%
Warehouse Sales - Delivery	49.8%	19.7 - 80.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	78.8%	65.0 - 100.0%
Heating & Cooling Supplies & Equipment	9.6%	0.0 - 15.0%
Industrial P-V-F (Pipes-Valves-Fittings)	5.1%	0.0 - 9.0%
Other Industrial Supplies & Equipment	2.5%	0.0 - 5.0%
Other Products	4.1%	0.0 - 2.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.8%	21.4 - 27.0%
Gross Margin on Direct Shipments	11.9%	7.1 - 17.2%
Gross Margin on Warehouse Sales	26.0%	22.2 - 28.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.44X	2.00 - 2.95X
Total Debt to Net Worth	52.4%	28.9 - 110.2%
Current Debt to Net Worth	43.8%	25.1 - 89.5%
Current Assets to Current Debt	3.23X	1.97 - 4.68X
Current Assets Minus Inventory/Curr Debt	1.31X	0.85 - 1.86X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	6.0 - 10.0
Average Invoice Size	$132	$98 - 302
Average Billing Line	$18.08	$11.72 - 37.16

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$153,676	$109,436 - 195,606
Gross Margin Per Employee	$36,600	$30,482 - 44,578
Average Compensation Per Employee	$18,659	$15,642 - 21,952
Average Fringe Benefits Per Employee	$3,249	$2,096 - 4,961
Compensation & Fringes Per Employee	$21,187	$18,345 - 26,483
Payroll to Net Sales	12.2%	10.8 - 14.3%
Fringe Benefits to Net Sales	2.4%	1.7 - 3.2%
Payroll & Fringes to Net Sales	14.4%	12.6 - 17.3%
Payroll to Gross Margin	50.4%	45.4 - 56.1%
Fringe Benefits to Gross Margin	8.1%	7.1 - 12.4%
Payroll & Fringes to Gross Margin	60.3%	53.4 - 63.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.89X	2.12 - 4.82X
No. of Days Average Inventory Carried	126 Days	76 - 172 Days
Total Cost of Goods Sold to Ave Inventory	3.60X	2.30 - 5.01X
Whse Gross Margin Return on Ave Inventory	108%	81 - 169%
Turn & Earn Profitability Index	79%	59 - 118%
Percent of Firms on LIFO	27.78%	
ACCOUNTS RECEIVABLE		
Average Collection Period	54 Days	46 - 64 Days
Gross Margin Return on Receivables	157%	132 - 211%
Aging of Receivable Dollars:		
Current	61.7%	52.4 - 76.4%
1-30 Days Past Due	17.9%	13.1 - 25.0%
31-60 Days Past Due	7.2%	2.7 - 11.5%
61-90 Days Past Due	5.7%	1.6 - 6.2%
Over 90 Days Past Due	7.5%	1.0 - 11.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,002	$555 - 1,822
1-30 Days Past Due	$894	$427 - 1,418
31-60 Days Past Due	$756	$360 - 1,458
61-90 Days Past Due	$566	$201 - 2,074
Over 90 Days Past Due	$1,246	$811 - 2,371
Total	$944	$570 - 1,412
Aging of Receivable Accounts:		
Current	66.8%	62.8 - 79.3%
1-30 Days Past Due	17.9%	6.5 - 23.0%
31-60 Days Past Due	6.2%	3.4 - 8.0%
61-90 Days Past Due	3.7%	1.5 - 6.0%
Over 90 Days Past Due	5.4%	1.3 - 7.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.2%	73.0 - 78.6%
Gross Margin	24.8%	21.4 - 27.0%
Operating Expenses:		
Selling Expenses	5.6%	4.5 - 8.4%
Delivery Expenses	1.7%	1.3 - 2.7%
Warehouse Expenses	2.1%	1.3 - 3.1%
General & Administrative Expenses	8.8%	6.4 - 12.4%
Occupancy Expenses	2.1%	1.4 - 3.3%
Other Operating Expenses	0.0%	0.0 - 0.4%
Total Operating Expenses	23.0%	19.7 - 26.1%
Net Operating Profit	1.6%	0.4 - 3.6%
Non-Operating Income	2.4%	1.3 - 2.9%
Non-Operating Expenses	1.4%	0.9 - 2.5%
Net Profit Before Tax	2.0%	0.6 - 4.5%
Net Profit After Tax	1.8%	0.5 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.0%	19.7 - 26.1%
Total Operating Expense to Gross Margin	92.7%	89.2 - 98.3%
Non-People Expense to Net Sales	8.1%	6.2 - 10.0%
Non-People Expense to Gross Margin	34.6%	27.9 - 37.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.1 - 1.0%
Times Interest Earned	3.0X	1.1 - 8.4X
BALANCE SHEET		
Cash	5.7%	0.5 - 10.0%
Accounts & Notes Receivable, Trade(Net)	30.7%	20.0 - 39.8%
Inventory	51.4%	36.6 - 64.4%
Other Current Assets	3.2%	0.3 - 3.6%
Total Current Assets	91.0%	85.7 - 96.6%
All Other Assets	9.0%	3.3 - 14.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.4%	20.0 - 45.7%
Total Long-Term Liabilities	7.5%	0.0 - 11.2%
Total Liabilities	42.0%	25.8 - 53.4%
Total Net Worth	58.0%	46.6 - 74.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.78%	1.42 - 12.86%
Total Assets to Net Worth	1.86X	1.45 - 3.03X
Net Profit After Tax to Total Assets	3.54%	0.92 - 5.88%
Net Sales to Total Assets	2.53X	1.99 - 2.89X
Net Profit After Tax to Net Sales	1.50%	0.60 - 2.60%
Net Profit Before Tax to Total Assets	4.54%	1.26 - 8.44%
EBIT to Total Assets	6.18%	4.99 - 11.44%
SALES ANALYSIS		
Net Sales($000)	$4,033	$3,733 - 5,162
Percent Sales Change from Prior Year	18.79%	5.23 - 31.18%
Sales Mix:		
Direct Sales	10.3%	4.3 - 14.8%
Warehouse Sales - Counter	31.1%	15.9 - 40.0%
Warehouse Sales - Delivery	58.7%	49.1 - 73.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	72.7%	60.0 - 85.0%
Heating & Cooling Supplies & Equipment	14.3%	3.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.7%	0.0 - 10.0%
Other Industrial Supplies & Equipment	0.8%	0.0 - 0.0%
Other Products	4.5%	0.0 - 8.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.0%	21.4 - 28.0%
Gross Margin on Direct Shipments	10.9%	7.2 - 17.4%
Gross Margin on Warehouse Sales	25.6%	23.7 - 28.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.75X	2.33 - 3.47X
Total Debt to Net Worth	85.8%	45.5 - 203.6%
Current Debt to Net Worth	69.7%	30.6 - 145.9%
Current Assets to Current Debt	2.35X	1.79 - 3.41X
Current Assets Minus Inventory/Curr Debt	1.02X	0.74 - 1.47X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.8	4.3 - 8.0
Average Invoice Size	$127	$102 - 202
Average Billing Line	$25.32	$17.71 - 32.30

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$165,614	$136,325 - 205,696
Gross Margin Per Employee	$40,297	$34,624 - 47,560
Average Compensation Per Employee	$19,380	$17,465 - 23,084
Average Fringe Benefits Per Employee	$3,830	$2,722 - 4,989
Compensation & Fringes Per Employee	$23,359	$21,006 - 27,001
Payroll to Net Sales	11.7%	10.3 - 13.7%
Fringe Benefits to Net Sales	2.1%	1.6 - 2.9%
Payroll & Fringes to Net Sales	14.0%	11.4 - 16.0%
Payroll to Gross Margin	49.6%	44.6 - 54.3%
Fringe Benefits to Gross Margin	8.9%	6.5 - 11.6%
Payroll & Fringes to Gross Margin	57.6%	52.8 - 63.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.45X	2.56 - 4.59X
No. of Days Average Inventory Carried	106 Days	79 - 142 Days
Total Cost of Goods Sold to Ave Inventory	3.71X	3.09 - 5.38X
Whse Gross Margin Return on Ave Inventory	114%	93 - 161%
Turn & Earn Profitability Index	85%	63 - 126%
Percent of Firms on LIFO	43.10%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	45 - 62 Days
Gross Margin Return on Receivables	181%	138 - 217%
Aging of Receivable Dollars:		
Current	64.3%	56.5 - 72.0%
1-30 Days Past Due	16.6%	13.0 - 20.5%
31-60 Days Past Due	7.4%	4.1 - 9.7%
61-90 Days Past Due	6.8%	2.2 - 11.5%
Over 90 Days Past Due	4.9%	0.0 - 8.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,210	$848 - 1,485
1-30 Days Past Due	$1,079	$650 - 1,863
31-60 Days Past Due	$999	$642 - 1,500
61-90 Days Past Due	$1,300	$784 - 1,840
Over 90 Days Past Due	$1,616	$929 - 2,597
Total	$1,257	$846 - 1,426
Aging of Receivable Accounts:		
Current	66.4%	58.7 - 74.7%
1-30 Days Past Due	16.4%	11.1 - 20.5%
31-60 Days Past Due	7.9%	5.3 - 9.5%
61-90 Days Past Due	5.8%	2.6 - 7.8%
Over 90 Days Past Due	3.4%	0.0 - 6.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.4%	72.0 - 78.6%
Gross Margin	25.0%	21.4 - 28.0%
Operating Expenses:		
Selling Expenses	5.5%	4.3 - 6.9%
Delivery Expenses	2.1%	1.3 - 2.8%
Warehouse Expenses	2.8%	1.8 - 3.8%
General & Administrative Expenses	9.9%	7.2 - 11.9%
Occupancy Expenses	2.0%	1.5 - 2.9%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	21.3%	19.5 - 24.9%
Net Operating Profit	2.3%	0.8 - 3.7%
Non-Operating Income	2.0%	1.2 - 2.6%
Non-Operating Expenses	1.9%	1.1 - 3.0%
Net Profit Before Tax	2.1%	0.9 - 3.4%
Net Profit After Tax	1.5%	0.6 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.3%	19.5 - 24.9%
Total Operating Expense to Gross Margin	89.7%	84.4 - 96.2%
Non-People Expense to Net Sales	8.1%	5.8 - 9.9%
Non-People Expense to Gross Margin	33.4%	25.1 - 39.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.4 - 1.8%
Times Interest Earned	2.7X	1.4 - 7.0X
BALANCE SHEET		
Cash	5.7%	1.4 - 7.7%
Accounts & Notes Receivable, Trade(Net)	31.9%	23.7 - 39.2%
Inventory	46.8%	39.6 - 54.7%
Other Current Assets	1.7%	0.2 - 1.1%
Total Current Assets	84.0%	80.1 - 92.8%
All Other Assets	13.9%	7.2 - 19.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.4%	26.6 - 49.6%
Total Long-Term Liabilities	9.2%	0.5 - 15.4%
Total Liabilities	49.6%	31.3 - 67.8%
Total Net Worth	50.4%	32.2 - 68.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.11%	3.32 - 20.05%
Total Assets to Net Worth	1.89X	1.62 - 3.38X
Net Profit After Tax to Total Assets	3.19%	1.62 - 5.64%
Net Sales to Total Assets	2.69X	2.10 - 3.10X
Net Profit After Tax to Net Sales	1.00%	0.70 - 2.30%
Net Profit Before Tax to Total Assets	4.08%	1.80 - 9.35%
EBIT to Total Assets	6.14%	3.49 - 10.89%
SALES ANALYSIS		
Net Sales($000)	$9,277	$7,827 - 10,547
Percent Sales Change from Prior Year	18.09%	7.41 - 24.35%
Sales Mix:		
Direct Sales	9.9%	3.1 - 10.5%
Warehouse Sales - Counter	25.6%	13.2 - 40.9%
Warehouse Sales - Delivery	64.5%	50.0 - 78.2%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	73.3%	60.0 - 85.0%
Heating & Cooling Supplies & Equipment	13.8%	1.0 - 23.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.2%	0.0 - 10.0%
Other Industrial Supplies & Equipment	2.0%	0.0 - 0.0%
Other Products	3.8%	0.0 - 3.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.5%	22.3 - 26.0%
Gross Margin on Direct Shipments	11.7%	7.8 - 15.2%
Gross Margin on Warehouse Sales	26.5%	23.0 - 27.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.10X	2.57 - 3.43X
Total Debt to Net Worth	89.0%	61.6 - 238.4%
Current Debt to Net Worth	69.8%	46.8 - 210.8%
Current Assets to Current Debt	2.22X	1.46 - 2.99X
Current Assets Minus Inventory/Curr Debt	0.80X	0.67 - 1.26X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 7.4
Average Invoice Size	$128	$110 - 187
Average Billing Line	$22.99	$16.19 - 38.45

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$177,388	$152,933 - 206,142
Gross Margin Per Employee	$43,223	$38,263 - 52,002
Average Compensation Per Employee	$21,046	$18,950 - 23,157
Average Fringe Benefits Per Employee	$3,481	$2,196 - 5,000
Compensation & Fringes Per Employee	$24,014	$21,529 - 27,876
Payroll to Net Sales	11.7%	10.5 - 12.8%
Fringe Benefits to Net Sales	1.8%	1.4 - 2.5%
Payroll & Fringes to Net Sales	13.5%	11.7 - 15.1%
Payroll to Gross Margin	47.4%	44.7 - 52.6%
Fringe Benefits to Gross Margin	8.4%	6.0 - 10.1%
Payroll & Fringes to Gross Margin	56.4%	51.0 - 63.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.90X	2.84 - 4.93X
No. of Days Average Inventory Carried	94 Days	74 - 129 Days
Total Cost of Goods Sold to Ave Inventory	4.23X	3.27 - 5.42X
Whse Gross Margin Return on Ave Inventory	136%	101 - 164%
Turn & Earn Profitability Index	99%	70 - 124%
Percent of Firms on LIFO	69.23%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	42 - 54 Days
Gross Margin Return on Receivables	186%	161 - 221%
Aging of Receivable Dollars:		
Current	67.9%	55.6 - 81.0%
1-30 Days Past Due	15.7%	9.0 - 24.0%
31-60 Days Past Due	6.7%	3.3 - 9.8%
61-90 Days Past Due	4.2%	1.8 - 6.3%
Over 90 Days Past Due	5.5%	0.7 - 9.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,079	$752 - 1,747
1-30 Days Past Due	$1,420	$900 - 2,596
31-60 Days Past Due	$1,415	$890 - 1,907
61-90 Days Past Due	$1,584	$659 - 2,087
Over 90 Days Past Due	$1,270	$706 - 3,267
Total	$1,228	$922 - 1,983
Aging of Receivable Accounts:		
Current	69.8%	60.7 - 83.7%
1-30 Days Past Due	15.8%	8.2 - 24.4%
31-60 Days Past Due	6.8%	4.1 - 9.0%
61-90 Days Past Due	4.2%	2.1 - 5.5%
Over 90 Days Past Due	3.3%	0.9 - 5.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.6%	74.0 - 77.7%
Gross Margin	23.5%	22.3 - 26.0%
Operating Expenses:		
Selling Expenses	6.4%	5.1 - 7.3%
Delivery Expenses	1.9%	1.1 - 2.5%
Warehouse Expenses	3.1%	1.6 - 4.3%
General & Administrative Expenses	8.0%	6.5 - 9.8%
Occupancy Expenses	1.6%	1.0 - 2.4%
Other Operating Expenses	0.0%	0.0 - 0.8%
Total Operating Expenses	22.5%	20.0 - 24.5%
Net Operating Profit	2.2%	1.0 - 3.0%
Non-Operating Income	2.0%	0.6 - 2.9%
Non-Operating Expenses	1.9%	1.0 - 3.0%
Net Profit Before Tax	1.3%	0.2 - 2.7%
Net Profit After Tax	1.0%	0.7 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.5%	20.0 - 24.5%
Total Operating Expense to Gross Margin	91.9%	86.8 - 96.1%
Non-People Expense to Net Sales	8.0%	6.7 - 9.7%
Non-People Expense to Gross Margin	34.0%	29.8 - 39.2%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.6 - 1.3%
Times Interest Earned	2.4X	1.5 - 5.9X
BALANCE SHEET		
Cash	4.4%	0.8 - 5.7%
Accounts & Notes Receivable, Trade(Net)	30.6%	23.8 - 34.1%
Inventory	50.9%	43.6 - 58.4%
Other Current Assets	2.4%	0.3 - 3.9%
Total Current Assets	88.3%	82.2 - 94.8%
All Other Assets	11.7%	5.2 - 17.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	48.3%	30.0 - 65.6%
Total Long-Term Liabilities	10.9%	0.7 - 17.1%
Total Liabilities	59.2%	40.8 - 79.8%
Total Net Worth	40.8%	20.2 - 59.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	12.86%	6.63 - 17.68%
Total Assets to Net Worth	2.38X	1.72 - 3.12X
Net Profit After Tax to Total Assets	5.28%	2.87 - 7.36%
Net Sales to Total Assets	2.40X	2.20 - 2.88X
Net Profit After Tax to Net Sales	1.90%	1.20 - 2.80%
Net Profit Before Tax to Total Assets	8.93%	4.29 - 13.66%
EBIT to Total Assets	10.94%	7.38 - 14.96%
SALES ANALYSIS		
Net Sales ($000)	$18,966	$16,382 - 25,653
Percent Sales Change from Prior Year	22.75%	6.00 - 32.43%
Sales Mix:		
Direct Sales	12.4%	9.2 - 17.7%
Warehouse Sales - Counter	39.2%	9.4 - 64.5%
Warehouse Sales - Delivery	48.3%	24.1 - 73.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	70.1%	59.0 - 78.0%
Heating & Cooling Supplies & Equipment	16.2%	0.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	9.9%	0.0 - 18.0%
Other Industrial Supplies & Equipment	1.2%	0.0 - 0.0%
Other Products	2.6%	0.0 - 2.2%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	22.4%	20.5 - 23.8%
Gross Margin on Direct Shipments	10.0%	8.9 - 11.3%
Gross Margin on Warehouse Sales	23.6%	22.3 - 24.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.16X	2.78 - 3.50X
Total Debt to Net Worth	128.6%	71.7 - 197.7%
Current Debt to Net Worth	87.9%	64.6 - 121.4%
Current Assets to Current Debt	1.97X	1.50 - 2.79X
Current Assets Minus Inventory/Curr Debt	0.77X	0.68 - 1.19X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.8 - 6.5
Average Invoice Size	$149	$123 - 185
Average Billing Line	$29.02	$23.19 - 37.74

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$182,869	$172,003 - 250,866
Gross Margin Per Employee	$41,260	$38,062 - 55,072
Average Compensation Per Employee	$20,102	$17,800 - 24,177
Average Fringe Benefits Per Employee	$3,910	$3,109 - 4,450
Compensation & Fringes Per Employee	$23,560	$20,990 - 28,189
Payroll to Net Sales	10.1%	9.3 - 12.0%
Fringe Benefits to Net Sales	2.1%	1.5 - 2.5%
Payroll & Fringes to Net Sales	12.8%	10.7 - 13.7%
Payroll to Gross Margin	45.7%	42.9 - 49.3%
Fringe Benefits to Gross Margin	8.8%	6.7 - 10.9%
Payroll & Fringes to Gross Margin	52.9%	49.2 - 58.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.19X	3.21 - 4.73X
No. of Days Average Inventory Carried	87 Days	77 - 113 Days
Total Cost of Goods Sold to Ave Inventory	4.88X	3.71 - 5.39X
Whse Gross Margin Return on Ave Inventory	125%	101 - 151%
Turn & Earn Profitability Index	103%	78 - 116%
Percent of Firms on LIFO	78.95%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	45 - 60 Days
Gross Margin Return on Receivables	168%	138 - 183%
Aging of Receivable Dollars:		
Current	64.6%	58.1 - 72.5%
1-30 Days Past Due	18.0%	16.6 - 20.9%
31-60 Days Past Due	7.6%	6.2 - 8.9%
61-90 Days Past Due	5.0%	1.6 - 6.3%
Over 90 Days Past Due	4.7%	0.0 - 8.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,349	$978 - 2,618
1-30 Days Past Due	$2,423	$825 - 2,912
31-60 Days Past Due	$2,014	$1,120 - 3,649
61-90 Days Past Due	$1,143	$757 - 2,125
Over 90 Days Past Due	$1,936	Insufficient Data
Total	$1,613	$1,067 - 2,161
Aging of Receivable Accounts:		
Current	67.2%	53.4 - 79.0%
1-30 Days Past Due	14.0%	7.8 - 18.2%
31-60 Days Past Due	7.5%	3.5 - 11.9%
61-90 Days Past Due	7.3%	2.8 - 12.5%
Over 90 Days Past Due	4.0%	0.0 - 8.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	78.0%	76.2 - 79.5%
Gross Margin	22.4%	20.5 - 23.8%
Operating Expenses:		
Selling Expenses	5.1%	4.8 - 7.2%
Delivery Expenses	1.5%	1.3 - 2.2%
Warehouse Expenses	2.3%	1.9 - 3.0%
General & Administrative Expenses	7.3%	6.2 - 8.5%
Occupancy Expenses	1.5%	1.1 - 2.2%
Other Operating Expenses	0.0%	0.0 - 0.4%
Total Operating Expenses	19.7%	15.3 - 20.9%
Net Operating Profit	3.1%	1.6 - 5.7%
Non-Operating Income	2.6%	1.8 - 3.0%
Non-Operating Expenses	2.2%	1.7 - 3.3%
Net Profit Before Tax	3.3%	1.8 - 5.4%
Net Profit After Tax	1.9%	1.2 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	19.7%	15.3 - 20.9%
Total Operating Expense to Gross Margin	84.3%	72.0 - 91.6%
Non-People Expense to Net Sales	6.9%	5.0 - 7.8%
Non-People Expense to Gross Margin	30.7%	22.5 - 32.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.5%
Times Interest Earned	4.3X	2.5 - 8.7X
BALANCE SHEET		
Cash	1.9%	-1.3 - 2.7%
Accounts & Notes Receivable, Trade(Net)	33.3%	25.7 - 39.5%
Inventory	44.2%	40.1 - 48.1%
Other Current Assets	1.2%	0.1 - 2.0%
Total Current Assets	79.7%	72.4 - 88.6%
All Other Assets	20.3%	11.4 - 27.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.4%	26.9 - 45.6%
Total Long-Term Liabilities	15.2%	8.5 - 18.2%
Total Liabilities	53.6%	41.4 - 63.3%
Total Net Worth	46.4%	36.7 - 58.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	11.95%	8.71 - 17.93%
Total Assets to Net Worth	1.72X	1.36 - 2.70X
Net Profit After Tax to Total Assets	6.23%	4.91 - 8.42%
Net Sales to Total Assets	2.58X	2.10 - 3.02X
Net Profit After Tax to Net Sales	2.60%	2.10 - 3.40%
Net Profit Before Tax to Total Assets	9.01%	6.56 - 13.39%
EBIT to Total Assets	11.43%	8.69 - 14.38%
SALES ANALYSIS		
Net Sales($000)	$4,433	$2,777 - 9,277
Percent Sales Change from Prior Year	20.77%	9.33 - 32.68%
Sales Mix:		
Direct Sales	10.0%	4.3 - 13.7%
Warehouse Sales - Counter	35.0%	10.8 - 57.0%
Warehouse Sales - Delivery	54.9%	39.1 - 81.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	74.9%	60.0 - 90.5%
Heating & Cooling Supplies & Equipment	12.6%	0.0 - 24.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.0%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.1%	0.0 - 0.3%
Other Products	4.3%	0.0 - 5.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.6%	20.8 - 26.4%
Gross Margin on Direct Shipments	10.6%	8.0 - 14.0%
Gross Margin on Warehouse Sales	24.7%	22.0 - 27.0%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.07X	2.38 - 3.57X
Total Debt to Net Worth	72.2%	35.7 - 163.3%
Current Debt to Net Worth	68.8%	29.2 - 110.4%
Current Assets to Current Debt	2.56X	1.84 - 3.53X
Current Assets Minus Inventory/Curr Debt	1.20X	0.76 - 1.74X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$149	$114 - 208
Average Billing Line	$26.61	$17.54 - 37.93

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$183,688	$163,503 - 228,334
Gross Margin Per Employee	$41,778	$36,353 - 53,226
Average Compensation Per Employee	$20,381	$17,599 - 23,888
Average Fringe Benefits Per Employee	$3,663	$2,349 - 4,944
Compensation & Fringes Per Employee	$23,508	$20,610 - 28,264
Payroll to Net Sales	10.9%	9.6 - 12.4%
Fringe Benefits to Net Sales	2.0%	1.4 - 2.6%
Payroll & Fringes to Net Sales	13.0%	10.6 - 14.6%
Payroll to Gross Margin	47.0%	43.3 - 52.1%
Fringe Benefits to Gross Margin	8.3%	6.2 - 10.5%
Payroll & Fringes to Gross Margin	54.1%	49.8 - 59.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.15X	3.05 - 5.02X
No. of Days Average Inventory Carried	88 Days	73 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.85X	3.31 - 6.03X
Whse Gross Margin Return on Ave Inventory	138%	102 - 170%
Turn & Earn Profitability Index	109%	80 - 129%
Percent of Firms on LIFO	46.27%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	45 - 60 Days
Gross Margin Return on Receivables	176%	138 - 200%
Aging of Receivable Dollars:		
Current	64.3%	55.0 - 74.6%
1-30 Days Past Due	17.3%	11.7 - 22.0%
31-60 Days Past Due	7.0%	3.1 - 10.1%
61-90 Days Past Due	5.6%	1.7 - 8.0%
Over 90 Days Past Due	5.8%	0.0 - 8.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,300	$821 - 2,152
1-30 Days Past Due	$1,337	$729 - 2,423
31-60 Days Past Due	$1,366	$644 - 2,265
61-90 Days Past Due	$1,407	$649 - 2,339
Over 90 Days Past Due	$1,936	$1,240 - 8,208
Total	$1,333	$985 - 2,009
Aging of Receivable Accounts:		
Current	70.6%	64.2 - 80.6%
1-30 Days Past Due	15.7%	9.1 - 17.4%
31-60 Days Past Due	6.5%	4.1 - 9.1%
61-90 Days Past Due	4.4%	1.6 - 5.5%
Over 90 Days Past Due	2.7%	0.0 - 3.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.1%	73.6 - 79.2%
Gross Margin	23.6%	20.8 - 26.4%
Operating Expenses:		
Selling Expenses	5.4%	4.4 - 6.5%
Delivery Expenses	1.5%	1.2 - 2.3%
Warehouse Expenses	2.1%	1.4 - 3.4%
General & Administrative Expenses	7.7%	5.9 - 10.0%
Occupancy Expenses	1.6%	1.1 - 2.7%
Other Operating Expenses	0.0%	0.0 - 0.1%
Total Operating Expenses	20.0%	16.8 - 22.7%
Net Operating Profit	3.5%	2.4 - 4.6%
Non-Operating Income	2.2%	1.4 - 2.9%
Non-Operating Expenses	1.6%	1.0 - 2.3%
Net Profit Before Tax	3.9%	3.0 - 4.8%
Net Profit After Tax	2.6%	2.1 - 3.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.0%	16.8 - 22.7%
Total Operating Expense to Gross Margin	85.2%	79.6 - 89.7%
Non-People Expense to Net Sales	6.2%	5.1 - 8.7%
Non-People Expense to Gross Margin	28.3%	22.5 - 34.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.1 - 1.2%
Times Interest Earned	6.8X	3.6 - 25.7X
BALANCE SHEET		
Cash	6.5%	1.0 - 12.2%
Accounts & Notes Receivable, Trade(Net)	34.3%	24.3 - 43.3%
Inventory	45.3%	38.8 - 53.0%
Other Current Assets	1.9%	0.2 - 1.3%
Total Current Assets	86.1%	79.8 - 96.6%
All Other Assets	12.3%	3.3 - 19.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.7%	25.6 - 49.7%
Total Long-Term Liabilities	7.9%	0.0 - 12.3%
Total Liabilities	47.7%	30.0 - 65.0%
Total Net Worth	52.3%	35.0 - 70.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

Industrial P-V-F Firms

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	3.26%	-4.14 - 7.39%
Total Assets to Net Worth	1.85X	1.46 - 2.47X
Net Profit After Tax to Total Assets	1.83%	-3.76 - 3.34%
Net Sales to Total Assets	2.34X	2.00 - 2.92X
Net Profit After Tax to Net Sales	0.80%	-1.30 - 1.40%
Net Profit Before Tax to Total Assets	2.41%	-4.23 - 6.60%
EBIT to Total Assets	4.58%	-1.54 - 7.62%
SALES ANALYSIS		
Net Sales ($000)	$4,683	$3,277 - 16,161
Percent Sales Change from Prior Year	-6.79%	-16.12 - 6.16%
Sales Mix:		
Direct Sales	16.6%	5.4 - 24.7%
Warehouse Sales - Counter	17.9%	0.6 - 15.6%
Warehouse Sales - Delivery	65.5%	46.0 - 92.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	7.6%	0.0 - 14.0%
Heating & Cooling Supplies & Equipment	2.6%	0.0 - 3.3%
Industrial P-V-F (Pipes-Valves-Fittings)	82.8%	68.8 - 99.3%
Other Industrial Supplies & Equipment	4.7%	0.0 - 10.0%
Other Products	2.2%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.4%	21.7 - 29.1%
Gross Margin on Direct Shipments	11.6%	9.1 - 15.0%
Gross Margin on Warehouse Sales	26.1%	23.6 - 29.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.72X	2.32 - 3.35X
Total Debt to Net Worth	83.9%	46.0 - 139.5%
Current Debt to Net Worth	74.9%	33.3 - 107.4%
Current Assets to Current Debt	2.30X	1.76 - 3.51X
Current Assets Minus Inventory/Curr Debt	1.07X	0.90 - 1.51X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.6 - 6.5
Average Invoice Size	$256	$212 - 378
Average Billing Line	$55.87	$28.05 - 86.90

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$196,923	$147,214 - 226,790
Gross Margin Per Employee	$44,917	$39,977 - 53,788
Average Compensation Per Employee	$23,382	$21,474 - 24,832
Average Fringe Benefits Per Employee	$3,841	$3,193 - 5,521
Compensation & Fringes Per Employee	$27,123	$24,336 - 30,099
Payroll to Net Sales	12.4%	10.2 - 16.6%
Fringe Benefits to Net Sales	2.3%	1.9 - 3.2%
Payroll & Fringes to Net Sales	14.1%	11.4 - 18.4%
Payroll to Gross Margin	51.0%	46.4 - 57.5%
Fringe Benefits to Gross Margin	9.4%	7.2 - 12.0%
Payroll & Fringes to Gross Margin	59.1%	53.0 - 66.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.06X	2.41 - 3.97X
No. of Days Average Inventory Carried	119 Days	92 - 151 Days
Total Cost of Goods Sold to Ave Inventory	3.60X	2.62 - 5.50X
Whse Gross Margin Return on Ave Inventory	109%	90 - 163%
Turn & Earn Profitability Index	78%	61 - 108%
Percent of Firms on LIFO	68.42%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	40 - 60 Days
Gross Margin Return on Receivables	174%	155 - 237%
Aging of Receivable Dollars:		
Current	61.8%	55.0 - 70.1%
1-30 Days Past Due	20.9%	15.5 - 25.4%
31-60 Days Past Due	7.8%	3.8 - 10.1%
61-90 Days Past Due	4.6%	1.2 - 6.4%
Over 90 Days Past Due	4.9%	0.9 - 7.8%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$2,051	$1,264 - 3,123
1-30 Days Past Due	$1,924	$975 - 2,693
31-60 Days Past Due	$1,643	$477 - 2,173
61-90 Days Past Due	$823	$403 - 2,030
Over 90 Days Past Due	$1,501	$1,099 - 2,052
Total	$1,973	$904 - 2,920
Aging of Receivable Accounts:		
Current	59.0%	50.6 - 70.8%
1-30 Days Past Due	21.8%	15.7 - 28.8%
31-60 Days Past Due	9.5%	6.0 - 10.3%
61-90 Days Past Due	5.5%	2.7 - 6.8%
Over 90 Days Past Due	4.2%	0.2 - 7.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.6%	70.9 - 78.3%
Gross Margin	25.4%	21.7 - 29.1%
Operating Expenses:		
Selling Expenses	7.8%	5.8 - 9.8%
Delivery Expenses	1.6%	1.2 - 2.7%
Warehouse Expenses	2.6%	1.8 - 3.7%
General & Administrative Expenses	9.1%	7.6 - 11.8%
Occupancy Expenses	1.6%	1.2 - 2.3%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	23.6%	20.5 - 29.4%
Net Operating Profit	0.9%	-1.4 - 3.1%
Non-Operating Income	1.5%	0.9 - 2.2%
Non-Operating Expenses	1.6%	0.8 - 2.4%
Net Profit Before Tax	1.2%	-1.2 - 3.4%
Net Profit After Tax	0.8%	-1.3 - 1.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.6%	20.5 - 29.4%
Total Operating Expense to Gross Margin	96.8%	87.2 - 107.5%
Non-People Expense to Net Sales	9.0%	7.1 - 11.0%
Non-People Expense to Gross Margin	35.1%	30.8 - 46.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.2 - 1.6%
Times Interest Earned	1.9X	-0.5 - 7.8X
BALANCE SHEET		
Cash	5.1%	1.3 - 8.3%
Accounts & Notes Receivable, Trade(Net)	32.0%	24.3 - 37.8%
Inventory	47.0%	36.6 - 56.3%
Other Current Assets	1.4%	0.4 - 1.3%
Total Current Assets	85.5%	82.8 - 92.0%
All Other Assets	14.5%	8.0 - 17.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.5%	20.4 - 43.7%
Total Long-Term Liabilities	12.7%	0.4 - 14.1%
Total Liabilities	47.2%	29.1 - 59.4%
Total Net Worth	52.8%	40.6 - 70.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	1.57%	-14.62 - 8.15%
Total Assets to Net Worth	2.03X	1.62 - 2.74X
Net Profit After Tax to Total Assets	0.35%	-8.84 - 4.44%
Net Sales to Total Assets	2.42X	2.00 - 3.17X
Net Profit After Tax to Net Sales	0.20%	-4.10 - 1.90%
Net Profit Before Tax to Total Assets	0.35%	-8.84 - 5.08%
EBIT to Total Assets	2.75%	-6.94 - 7.28%
SALES ANALYSIS		
Net Sales($000)	$3,044	$1,605 - 3,417
Percent Sales Change from Prior Year	-13.59%	-22.60 - -4.01%
Sales Mix:		
Direct Sales	15.4%	3.7 - 31.8%
Warehouse Sales - Counter	23.9%	1.1 - 45.0%
Warehouse Sales - Delivery	60.7%	30.0 - 93.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	8.1%	0.0 - 15.0%
Heating & Cooling Supplies & Equipment	0.7%	0.0 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	84.2%	75.0 - 95.0%
Other Industrial Supplies & Equipment	4.2%	0.0 - 10.0%
Other Products	2.8%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.4%	23.9 - 30.8%
Gross Margin on Direct Shipments	12.9%	9.3 - 14.6%
Gross Margin on Warehouse Sales	28.7%	25.0 - 31.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.77X	2.34 - 3.78X
Total Debt to Net Worth	90.2%	54.1 - 156.4%
Current Debt to Net Worth	78.2%	45.2 - 128.1%
Current Assets to Current Debt	2.11X	1.81 - 3.48X
Current Assets Minus Inventory/Curr Debt	0.97X	0.80 - 1.60X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.8 - 8.0
Average Invoice Size	$223	$205 - 276
Average Billing Line	$47.73	$26.04 - 65.59

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$154,615	$126,068 - 215,519
Gross Margin Per Employee	$41,407	$37,610 - 49,641
Average Compensation Per Employee	$23,218	$21,501 - 26,491
Average Fringe Benefits Per Employee	$3,476	$3,072 - 5,099
Compensation & Fringes Per Employee	$26,773	$24,326 - 28,501
Payroll to Net Sales	16.4%	12.9 - 17.7%
Fringe Benefits to Net Sales	2.6%	2.2 - 3.7%
Payroll & Fringes to Net Sales	17.3%	12.3 - 20.9%
Payroll to Gross Margin	54.6%	49.5 - 67.3%
Fringe Benefits to Gross Margin	8.9%	6.9 - 12.7%
Payroll & Fringes to Gross Margin	64.5%	48.5 - 69.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.96X	2.22 - 5.36X
No. of Days Average Inventory Carried	92 Days	68 - 173 Days
Total Cost of Goods Sold to Ave Inventory	3.64X	2.63 - 5.79X
Whse Gross Margin Return on Ave Inventory	167%	111 - 275%
Turn & Earn Profitability Index	114%	66 - 157%
Percent of Firms on LIFO	40.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	35 - 63 Days
Gross Margin Return on Receivables	235%	206 - 287%
Aging of Receivable Dollars:		
Current	57.7%	57.2 - 68.3%
1-30 Days Past Due	22.3%	14.7 - 29.3%
31-60 Days Past Due	8.4%	3.1 - 14.0%
61-90 Days Past Due	4.8%	1.7 - 6.0%
Over 90 Days Past Due	6.7%	0.9 - 9.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,479	$995 - 2,192
1-30 Days Past Due	$1,055	$651 - 1,905
31-60 Days Past Due	$464	$286 - 2,160
61-90 Days Past Due	$715	$412 - 1,536
Over 90 Days Past Due	$1,189	$574 - 1,507
Total	$1,321	$813 - 2,063
Aging of Receivable Accounts:		
Current	54.6%	50.1 - 57.7%
1-30 Days Past Due	23.1%	21.0 - 32.2%
31-60 Days Past Due	10.7%	7.3 - 11.1%
61-90 Days Past Due	5.6%	3.1 - 7.2%
Over 90 Days Past Due	6.0%	1.1 - 10.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	71.7%	69.2 - 76.1%
Gross Margin	28.4%	23.9 - 30.8%
Operating Expenses:		
Selling Expenses	8.4%	6.7 - 11.1%
Delivery Expenses	1.5%	1.2 - 2.5%
Warehouse Expenses	3.3%	1.1 - 5.1%
General & Administrative Expenses	12.2%	9.5 - 15.9%
Occupancy Expenses	1.3%	0.5 - 3.1%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	29.7%	26.3 - 32.2%
Net Operating Profit	0.5%	-5.5 - 3.5%
Non-Operating Income	1.5%	0.3 - 1.9%
Non-Operating Expenses	1.4%	0.3 - 1.8%
Net Profit Before Tax	1.4%	-3.6 - 4.3%
Net Profit After Tax	0.2%	-4.1 - 1.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	29.7%	26.3 - 32.2%
Total Operating Expense to Gross Margin	98.2%	87.6 - 121.5%
Non-People Expense to Net Sales	9.7%	9.0 - 11.0%
Non-People Expense to Gross Margin	34.2%	31.4 - 38.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.1%	0.3 - 1.6%
Times Interest Earned	0.4X	-1.6 - 1.9X
BALANCE SHEET		
Cash	5.7%	-0.1 - 8.3%
Accounts & Notes Receivable, Trade(Net)	31.9%	20.0 - 44.7%
Inventory	47.9%	35.4 - 59.7%
Other Current Assets	0.9%	0.4 - 1.3%
Total Current Assets	86.5%	85.0 - 93.9%
All Other Assets	13.5%	6.1 - 15.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	33.8%	21.7 - 43.7%
Total Long-Term Liabilities	22.2%	2.9 - 35.3%
Total Liabilities	56.0%	35.9 - 71.4%
Total Net Worth	44.0%	28.6 - 64.1%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	4.82%	2.49 - 10.07%
Total Assets to Net Worth	1.48X	1.33 - 2.23X
Net Profit After Tax to Total Assets	3.03%	1.38 - 6.84%
Net Sales to Total Assets	2.36X	2.18 - 3.01X
Net Profit After Tax to Net Sales	1.10%	0.50 - 2.80%
Net Profit Before Tax to Total Assets	4.39%	1.40 - 12.40%
EBIT to Total Assets	6.47%	3.90 - 12.44%
SALES ANALYSIS		
Net Sales($000)	$6,025	$4,237 - 8,552
Percent Sales Change from Prior Year	-4.19%	-14.58 - 14.56%
Sales Mix:		
Direct Sales	12.8%	2.3 - 14.6%
Warehouse Sales - Counter	16.0%	0.3 - 15.0%
Warehouse Sales - Delivery	71.2%	51.4 - 94.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	7.7%	0.0 - 15.0%
Heating & Cooling Supplies & Equipment	4.4%	0.0 - 5.0%
Industrial P-V-F (Pipes-Valves-Fittings)	79.7%	65.0 - 100.0%
Other Industrial Supplies & Equipment	5.0%	0.0 - 5.0%
Other Products	3.2%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.6%	22.8 - 29.9%
Gross Margin on Direct Shipments	9.0%	6.0 - 18.7%
Gross Margin on Warehouse Sales	27.7%	23.7 - 29.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.63X	2.37 - 3.34X
Total Debt to Net Worth	47.8%	33.2 - 122.6%
Current Debt to Net Worth	47.0%	33.2 - 103.7%
Current Assets to Current Debt	2.98X	1.60 - 3.72X
Current Assets Minus Inventory/Curr Debt	1.09X	0.92 - 1.52X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.1 - 7.5
Average Invoice Size	$247	$158 - 418
Average Billing Line	$45.16	$26.37 - 62.94

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$196,923	$142,525 - 263,748
Gross Margin Per Employee	$48,563	$42,252 - 60,875
Average Compensation Per Employee	$23,747	$22,019 - 24,447
Average Fringe Benefits Per Employee	$3,887	$3,014 - 6,957
Compensation & Fringes Per Employee	$28,068	$24,957 - 31,724
Payroll to Net Sales	12.4%	10.1 - 15.7%
Fringe Benefits to Net Sales	2.5%	2.0 - 3.2%
Payroll & Fringes to Net Sales	15.8%	12.1 - 18.2%
Payroll to Gross Margin	47.3%	43.5 - 53.8%
Fringe Benefits to Gross Margin	8.5%	6.9 - 12.1%
Payroll & Fringes to Gross Margin	59.1%	52.1 - 61.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.63X	2.38 - 5.19X
No. of Days Average Inventory Carried	139 Days	90 - 153 Days
Total Cost of Goods Sold to Ave Inventory	3.17X	2.52 - 6.34X
Whse Gross Margin Return on Ave Inventory	105%	98 - 179%
Turn & Earn Profitability Index	77%	68 - 132%
Percent of Firms on LIFO	75.73%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	38 - 52 Days
Gross Margin Return on Receivables	213%	157 - 314%
Aging of Receivable Dollars:		
Current	65.7%	54.5 - 78.1%
1-30 Days Past Due	20.8%	16.1 - 27.7%
31-60 Days Past Due	6.6%	3.5 - 7.8%
61-90 Days Past Due	3.2%	1.0 - 5.6%
Over 90 Days Past Due	3.7%	0.0 - 6.7%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,371	$815 - 3,123
1-30 Days Past Due	$1,942	$788 - 2,873
31-60 Days Past Due	$845	$528 - 2,756
61-90 Days Past Due	$920	$281 - 3,255
Over 90 Days Past Due	$2,149	Insufficient Data
Total	$1,001	$729 - 2,954
Aging of Receivable Accounts:		
Current	66.1%	54.9 - 73.6%
1-30 Days Past Due	20.3%	14.8 - 27.0%
31-60 Days Past Due	7.6%	5.6 - 8.9%
61-90 Days Past Due	3.8%	2.4 - 4.9%
Over 90 Days Past Due	2.2%	0.0 - 4.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.2%	70.0 - 77.2%
Gross Margin	26.6%	22.8 - 29.9%
Operating Expenses:		
Selling Expenses	9.2%	5.2 - 11.1%
Delivery Expenses	2.4%	0.9 - 3.2%
Warehouse Expenses	2.8%	1.4 - 3.1%
General & Administrative Expenses	9.7%	8.6 - 11.1%
Occupancy Expenses	1.5%	1.2 - 2.4%
Other Operating Expenses	0.0%	0.0 - 0.1%
Total Operating Expenses	24.2%	21.6 - 28.7%
Net Operating Profit	0.6%	-1.6 - 4.2%
Non-Operating Income	1.5%	0.7 - 2.2%
Non-Operating Expenses	1.2%	0.6 - 2.3%
Net Profit Before Tax	1.6%	-1.9 - 5.0%
Net Profit After Tax	1.1%	0.5 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.2%	21.6 - 28.7%
Total Operating Expense to Gross Margin	97.5%	84.5 - 104.5%
Non-People Expense to Net Sales	10.1%	6.9 - 12.2%
Non-People Expense to Gross Margin	37.4%	27.6 - 49.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.3%	0.1 - 1.7%
Times Interest Earned	6.3X	1.3 - 104.2X
BALANCE SHEET		
Cash	4.2%	1.1 - 7.7%
Accounts & Notes Receivable, Trade(Net)	33.5%	25.5 - 41.9%
Inventory	47.9%	34.1 - 59.9%
Other Current Assets	1.5%	0.3 - 1.7%
Total Current Assets	87.1%	80.6 - 93.3%
All Other Assets	12.9%	6.7 - 19.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.3%	21.6 - 51.2%
Total Long-Term Liabilities	4.6%	0.0 - 8.8%
Total Liabilities	42.9%	23.5 - 59.1%
Total Net Worth	57.1%	40.9 - 76.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	0.95%	-2.97 - 4.09%
Total Assets to Net Worth	1.87X	1.55 - 2.36X
Net Profit After Tax to Total Assets	0.74%	-1.62 - 2.64%
Net Sales to Total Assets	2.12X	1.84 - 2.66X
Net Profit After Tax to Net Sales	0.50%	-0.60 - 1.30%
Net Profit Before Tax to Total Assets	2.28%	-2.81 - 5.90%
EBIT to Total Assets	4.31%	-0.10 - 7.62%
SALES ANALYSIS		
Net Sales ($000)	$20,215	$16,161 - 32,415
Percent Sales Change from Prior Year	-2.49%	-9.92 - 5.93%
Sales Mix:		
Direct Sales	23.6%	12.8 - 29.8%
Warehouse Sales - Counter	12.9%	0.2 - 14.1%
Warehouse Sales - Delivery	63.5%	49.3 - 87.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	6.7%	0.0 - 11.5%
Heating & Cooling Supplies & Equipment	3.4%	0.0 - 5.0%
Industrial P-V-F (Pipes-Valves-Fittings)	84.0%	71.5 - 98.5%
Other Industrial Supplies & Equipment	5.2%	0.0 - 10.6%
Other Products	0.7%	0.0 - 0.9%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	21.7%	19.7 - 24.4%
Gross Margin on Direct Shipments	11.3%	10.1 - 15.3%
Gross Margin on Warehouse Sales	23.8%	21.9 - 25.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.70X	2.13 - 3.30X
Total Debt to Net Worth	86.8%	55.0 - 136.0%
Current Debt to Net Worth	66.2%	36.2 - 91.5%
Current Assets to Current Debt	2.43X	2.06 - 3.53X
Current Assets Minus Inventory/Curr Debt	1.27X	0.93 - 1.78X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.6	3.0 - 5.0
Average Invoice Size	$360	$261 - 510
Average Billing Line	$90.60	$56.97 - 120.94

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$223,802	$193,073 - 244,370
Gross Margin Per Employee	$46,319	$41,892 - 53,788
Average Compensation Per Employee	$23,033	$20,429 - 25,704
Average Fringe Benefits Per Employee	$4,680	$3,317 - 5,623
Compensation & Fringes Per Employee	$27,175	$24,256 - 31,510
Payroll to Net Sales	10.2%	9.4 - 11.9%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.4%
Payroll & Fringes to Net Sales	12.2%	10.9 - 14.1%
Payroll to Gross Margin	49.4%	45.5 - 57.5%
Fringe Benefits to Gross Margin	9.5%	7.6 - 11.1%
Payroll & Fringes to Gross Margin	56.9%	54.6 - 70.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.05X	2.33 - 3.43X
No. of Days Average Inventory Carried	119 Days	106 - 157 Days
Total Cost of Goods Sold to Ave Inventory	4.25X	2.68 - 4.95X
Whse Gross Margin Return on Ave Inventory	94%	67 - 114%
Turn & Earn Profitability Index	71%	50 - 83%
Percent of Firms on LIFO	100.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	55 Days	44 - 61 Days
Gross Margin Return on Receivables	143%	134 - 173%
Aging of Receivable Dollars:		
Current	63.4%	54.6 - 70.4%
1-30 Days Past Due	19.3%	15.8 - 24.7%
31-60 Days Past Due	8.0%	5.1 - 10.3%
61-90 Days Past Due	5.5%	1.2 - 9.0%
Over 90 Days Past Due	3.9%	2.3 - 5.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$3,074	$2,231 - 6,581
1-30 Days Past Due	$2,384	$1,887 - 4,645
31-60 Days Past Due	$2,013	$1,972 - 2,448
61-90 Days Past Due	$1,111	$558 - 1,592
Over 90 Days Past Due	$1,501	$1,202 - 1,882
Total	$2,907	$2,137 - 4,136
Aging of Receivable Accounts:		
Current	55.8%	36.4 - 78.8%
1-30 Days Past Due	22.2%	10.7 - 30.3%
31-60 Days Past Due	10.2%	5.4 - 11.1%
61-90 Days Past Due	7.3%	2.4 - 10.1%
Over 90 Days Past Due	4.6%	2.4 - 5.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	78.5%	75.6 - 80.3%
Gross Margin	21.7%	19.7 - 24.4%
Operating Expenses:		
Selling Expenses	7.1%	6.0 - 9.6%
Delivery Expenses	1.6%	1.0 - 2.3%
Warehouse Expenses	2.2%	2.0 - 3.8%
General & Administrative Expenses	7.4%	5.9 - 8.2%
Occupancy Expenses	1.7%	1.4 - 2.0%
Other Operating Expenses	0.0%	0.0 - 0.5%
Total Operating Expenses	20.6%	18.2 - 22.5%
Net Operating Profit	1.2%	-0.9 - 2.4%
Non-Operating Income	1.4%	1.0 - 2.4%
Non-Operating Expenses	2.0%	1.2 - 2.7%
Net Profit Before Tax	0.4%	-1.7 - 2.0%
Net Profit After Tax	0.5%	-0.6 - 1.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.6%	18.2 - 22.5%
Total Operating Expense to Gross Margin	95.5%	88.9 - 104.3%
Non-People Expense to Net Sales	7.3%	6.2 - 9.2%
Non-People Expense to Gross Margin	35.1%	26.5 - 46.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.4 - 1.6%
Times Interest Earned	3.4X	0.2 - 6.2X
BALANCE SHEET		
Cash	5.5%	1.4 - 9.3%
Accounts & Notes Receivable, Trade(Net)	30.4%	24.3 - 35.2%
Inventory	45.1%	39.8 - 51.6%
Other Current Assets	1.8%	1.0 - 2.9%
Total Current Assets	82.7%	74.7 - 89.8%
All Other Assets	17.3%	10.2 - 25.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	31.0%	18.6 - 41.3%
Total Long-Term Liabilities	12.1%	5.3 - 19.7%
Total Liabilities	43.1%	28.7 - 55.5%
Total Net Worth	56.9%	44.4 - 71.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.72%	4.02 - 10.11%
Total Assets to Net Worth	1.68X	1.30 - 2.07X
Net Profit After Tax to Total Assets	3.30%	2.53 - 7.80%
Net Sales to Total Assets	2.32X	1.89 - 3.08X
Net Profit After Tax to Net Sales	1.30%	1.20 - 3.20%
Net Profit Before Tax to Total Assets	6.48%	3.84 - 12.90%
EBIT to Total Assets	7.62%	4.97 - 11.56%
SALES ANALYSIS		
Net Sales($000)	$6,816	$3,643 - 16,161
Percent Sales Change from Prior Year	-4.40%	-15.16 - 8.47%
Sales Mix:		
Direct Sales	15.7%	6.3 - 22.5%
Warehouse Sales - Counter	22.5%	3.8 - 32.6%
Warehouse Sales - Delivery	61.8%	42.0 - 84.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	9.0%	0.0 - 16.3%
Heating & Cooling Supplies & Equipment	4.2%	0.0 - 5.0%
Industrial P-V-F (Pipes-Valves-Fittings)	79.2%	63.8 - 92.5%
Other Industrial Supplies & Equipment	5.3%	0.0 - 11.3%
Other Products	2.3%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.3%	23.0 - 29.3%
Gross Margin on Direct Shipments	10.2%	7.8 - 13.0%
Gross Margin on Warehouse Sales	27.0%	24.5 - 31.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.61X	2.21 - 3.41X
Total Debt to Net Worth	67.6%	30.8 - 106.4%
Current Debt to Net Worth	53.0%	22.9 - 81.5%
Current Assets to Current Debt	3.03X	2.09 - 5.05X
Current Assets Minus Inventory/Curr Debt	1.29X	0.98 - 1.80X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.5	4.5 - 7.7
Average Invoice Size	$281	$183 - 399
Average Billing Line	$47.04	$26.90 - 74.91

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$200,213	$154,866 - 251,965
Gross Margin Per Employee	$50,616	$43,484 - 60,348
Average Compensation Per Employee	$24,356	$21,602 - 27,081
Average Fringe Benefits Per Employee	$5,093	$3,410 - 6,687
Compensation & Fringes Per Employee	$27,671	$23,876 - 31,773
Payroll to Net Sales	12.4%	9.7 - 15.8%
Fringe Benefits to Net Sales	2.2%	1.9 - 3.4%
Payroll & Fringes to Net Sales	14.8%	11.1 - 17.4%
Payroll to Gross Margin	47.2%	44.8 - 52.4%
Fringe Benefits to Gross Margin	8.8%	7.2 - 13.2%
Payroll & Fringes to Gross Margin	56.1%	50.8 - 62.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.74X	2.38 - 3.96X
No. of Days Average Inventory Carried	133 Days	94 - 154 Days
Total Cost of Goods Sold to Ave Inventory	3.21X	2.58 - 5.81X
Whse Gross Margin Return on Ave Inventory	114%	102 - 179%
Turn & Earn Profitability Index	80%	72 - 100%
Percent of Firms on LIFO	72.22%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	40 - 61 Days
Gross Margin Return on Receivables	173%	156 - 254%
Aging of Receivable Dollars:		
Current	61.6%	51.3 - 69.2%
1-30 Days Past Due	19.3%	14.9 - 25.4%
31-60 Days Past Due	7.6%	4.1 - 9.5%
61-90 Days Past Due	5.2%	1.9 - 8.2%
Over 90 Days Past Due	6.2%	1.3 - 9.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,474	$839 - 2,861
1-30 Days Past Due	$2,075	$956 - 3,129
31-60 Days Past Due	$1,337	$576 - 2,370
61-90 Days Past Due	$1,640	$423 - 3,156
Over 90 Days Past Due	$1,882	$1,223 - 2,406
Total	$1,692	$895 - 2,852
Aging of Receivable Accounts:		
Current	64.5%	52.8 - 74.4%
1-30 Days Past Due	18.1%	10.7 - 23.6%
31-60 Days Past Due	8.7%	5.4 - 10.3%
61-90 Days Past Due	4.5%	2.2 - 5.9%
Over 90 Days Past Due	4.2%	0.2 - 7.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.6%	70.7 - 77.0%
Gross Margin	26.3%	23.0 - 29.3%
Operating Expenses:		
Selling Expenses	7.8%	5.5 - 10.6%
Delivery Expenses	1.5%	1.1 - 2.5%
Warehouse Expenses	2.5%	1.7 - 3.2%
General & Administrative Expenses	8.9%	7.5 - 10.1%
Occupancy Expenses	1.5%	1.1 - 2.5%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	22.8%	20.8 - 26.8%
Net Operating Profit	3.0%	0.6 - 4.2%
Non-Operating Income	1.5%	1.4 - 2.2%
Non-Operating Expenses	0.9%	0.5 - 1.5%
Net Profit Before Tax	3.1%	1.6 - 5.1%
Net Profit After Tax	1.3%	1.2 - 3.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.8%	20.8 - 26.8%
Total Operating Expense to Gross Margin	87.9%	84.0 - 97.7%
Non-People Expense to Net Sales	8.2%	6.2 - 11.5%
Non-People Expense to Gross Margin	33.3%	23.3 - 42.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.2%	0.0 - 0.8%
Times Interest Earned	7.0X	4.0 - 86.5X
BALANCE SHEET		
Cash	4.2%	0.7 - 7.3%
Accounts & Notes Receivable, Trade(Net)	33.0%	24.8 - 39.2%
Inventory	49.2%	45.1 - 58.5%
Other Current Assets	1.5%	0.3 - 1.3%
Total Current Assets	87.8%	83.4 - 92.1%
All Other Assets	12.2%	7.9 - 16.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	30.6%	18.6 - 42.8%
Total Long-Term Liabilities	6.8%	0.0 - 11.1%
Total Liabilities	37.4%	23.5 - 51.5%
Total Net Worth	62.6%	48.5 - 76.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

Plumbing Supplies & Equipment

and Industrial P-V-F Firms

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	5.54%	2.19 - 10.04%
Total Assets to Net Worth	1.57X	1.35 - 2.12X
Net Profit After Tax to Total Assets	2.80%	1.22 - 6.08%
Net Sales to Total Assets	2.49X	2.06 - 2.88X
Net Profit After Tax to Net Sales	1.40%	0.50 - 2.60%
Net Profit Before Tax to Total Assets	3.72%	1.32 - 10.16%
EBIT to Total Assets	5.03%	2.87 - 10.11%
SALES ANALYSIS		
Net Sales ($000)	$5,809	$2,983 - 12,619
Percent Sales Change from Prior Year	12.68%	3.00 - 19.34%
Sales Mix:		
Direct Sales	10.7%	2.9 - 15.5%
Warehouse Sales - Counter	24.3%	6.7 - 30.0%
Warehouse Sales - Delivery	65.0%	50.4 - 80.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	41.3%	35.0 - 50.0%
Heating & Cooling Supplies & Equipment	20.7%	12.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	23.3%	15.0 - 31.0%
Other Industrial Supplies & Equipment	6.0%	0.0 - 10.5%
Other Products	8.6%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.1%	21.3 - 26.2%
Gross Margin on Direct Shipments	11.7%	8.6 - 15.0%
Gross Margin on Warehouse Sales	24.4%	22.8 - 28.0%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.90X	2.44 - 3.42X
Total Debt to Net Worth	56.7%	35.6 - 112.0%
Current Debt to Net Worth	42.2%	26.7 - 82.5%
Current Assets to Current Debt	3.00X	2.32 - 4.08X
Current Assets Minus Inventory/Curr Debt	1.43X	0.86 - 2.12X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.1 - 6.0
Average Invoice Size	$157	$113 - 212
Average Billing Line	$32.30	$19.00 - 42.08

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$167,513	$134,133 - 217,487
Gross Margin Per Employee	$39,630	$33,754 - 45,670
Average Compensation Per Employee	$18,869	$16,191 - 22,653
Average Fringe Benefits Per Employee	$3,769	$3,048 - 4,904
Compensation & Fringes Per Employee	$23,150	$20,203 - 27,675
Payroll to Net Sales	11.6%	10.8 - 13.2%
Fringe Benefits to Net Sales	2.3%	1.8 - 2.9%
Payroll & Fringes to Net Sales	14.3%	12.2 - 16.3%
Payroll to Gross Margin	49.2%	45.3 - 53.3%
Fringe Benefits to Gross Margin	9.5%	8.4 - 11.4%
Payroll & Fringes to Gross Margin	59.8%	55.2 - 64.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.43X	2.70 - 4.85X
No. of Days Average Inventory Carried	106 Days	75 - 135 Days
Total Cost of Goods Sold to Ave Inventory	4.03X	3.23 - 6.27X
Whse Gross Margin Return on Ave Inventory	108%	94 - 141%
Turn & Earn Profitability Index	84%	72 - 105%
Percent of Firms on LIFO	47.22%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	43 - 57 Days
Gross Margin Return on Receivables	171%	152 - 203%
Aging of Receivable Dollars:		
Current	63.7%	58.0 - 73.8%
1-30 Days Past Due	18.5%	14.8 - 23.4%
31-60 Days Past Due	8.6%	5.4 - 11.5%
61-90 Days Past Due	5.8%	3.1 - 7.8%
Over 90 Days Past Due	3.5%	0.0 - 4.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$785	$520 - 1,279
1-30 Days Past Due	$1,021	$611 - 1,803
31-60 Days Past Due	$896	$576 - 1,923
61-90 Days Past Due	$1,291	$670 - 2,045
Over 90 Days Past Due	$1,077	$592 - 1,566
Total	$978	$588 - 1,512
Aging of Receivable Accounts:		
Current	66.0%	57.0 - 78.3%
1-30 Days Past Due	17.7%	8.6 - 23.6%
31-60 Days Past Due	8.3%	3.7 - 12.2%
61-90 Days Past Due	4.2%	1.8 - 6.1%
Over 90 Days Past Due	3.8%	0.8 - 4.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.1%	73.8 - 78.7%
Gross Margin	24.1%	21.3 - 26.2%
Operating Expenses:		
Selling Expenses	6.0%	4.8 - 7.6%
Delivery Expenses	1.7%	1.4 - 2.2%
Warehouse Expenses	2.6%	1.9 - 3.5%
General & Administrative Expenses	8.1%	7.0 - 10.2%
Occupancy Expenses	2.1%	1.1 - 2.7%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	22.7%	19.5 - 24.1%
Net Operating Profit	1.0%	0.1 - 2.9%
Non-Operating Income	2.1%	1.4 - 3.0%
Non-Operating Expenses	1.5%	1.1 - 2.3%
Net Profit Before Tax	1.2%	0.3 - 3.1%
Net Profit After Tax	1.4%	0.5 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	19.5 - 24.1%
Total Operating Expense to Gross Margin	95.3%	88.7 - 99.7%
Non-People Expense to Net Sales	8.0%	6.6 - 9.0%
Non-People Expense to Gross Margin	33.5%	29.2 - 38.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.1 - 1.0%
Times Interest Earned	3.2X	1.5 - 16.1X
BALANCE SHEET		
Cash	6.3%	1.3 - 11.2%
Accounts & Notes Receivable, Trade(Net)	31.8%	25.3 - 39.7%
Inventory	46.4%	37.7 - 54.4%
Other Current Assets	1.2%	0.2 - 1.4%
Total Current Assets	85.8%	81.2 - 91.3%
All Other Assets	14.2%	8.7 - 18.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	29.9%	19.0 - 36.8%
Total Long-Term Liabilities	9.5%	1.5 - 14.0%
Total Liabilities	39.4%	26.2 - 50.6%
Total Net Worth	60.6%	49.3 - 73.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	1.71%	-0.97 - 5.04%
Total Assets to Net Worth	1.58X	1.36 - 2.43X
Net Profit After Tax to Total Assets	0.84%	-0.64 - 1.88%
Net Sales to Total Assets	2.08X	1.43 - 2.60X
Net Profit After Tax to Net Sales	0.50%	-0.20 - 1.30%
Net Profit Before Tax to Total Assets	1.27%	-0.31 - 2.71%
EBIT to Total Assets	3.03%	1.35 - 6.09%
SALES ANALYSIS		
Net Sales ($000)	$1,940	$1,734 - 2,039
Percent Sales Change from Prior Year	8.19%	2.82 - 16.28%
Sales Mix:		
Direct Sales	5.0%	Insufficient Data
Warehouse Sales - Counter	36.8%	Insufficient Data
Warehouse Sales - Delivery	58.2%	Insufficient Data
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	42.6%	34.0 - 50.0%
Heating & Cooling Supplies & Equipment	22.4%	8.0 - 31.0%
Industrial P-V-F (Pipes-Valves-Fittings)	16.9%	7.5 - 28.5%
Other Industrial Supplies & Equipment	6.1%	0.0 - 11.0%
Other Products	11.9%	0.5 - 26.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.6%	23.6 - 29.7%
Gross Margin on Direct Shipments	20.8%	Insufficient Data
Gross Margin on Warehouse Sales	27.7%	23.5 - 30.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.34X	1.71 - 2.89X
Total Debt to Net Worth	58.1%	36.4 - 143.7%
Current Debt to Net Worth	48.0%	21.0 - 78.7%
Current Assets to Current Debt	3.61X	2.73 - 5.68X
Current Assets Minus Inventory/Curr Debt	1.01X	0.86 - 2.46X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.2 - 6.5
Average Invoice Size	$110	$83 - 124
Average Billing Line	$21.94	$16.03 - 26.96

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$128,493	$105,220 - 133,434
Gross Margin Per Employee	$34,185	$30,697 - 37,141
Average Compensation Per Employee	$16,267	$14,769 - 19,682
Average Fringe Benefits Per Employee	$2,744	$1,871 - 5,341
Compensation & Fringes Per Employee	$20,872	$17,052 - 23,477
Payroll to Net Sales	13.1%	11.8 - 14.9%
Fringe Benefits to Net Sales	2.7%	1.5 - 4.0%
Payroll & Fringes to Net Sales	15.9%	14.4 - 20.5%
Payroll to Gross Margin	48.5%	46.1 - 51.7%
Fringe Benefits to Gross Margin	8.6%	5.7 - 16.4%
Payroll & Fringes to Gross Margin	57.8%	53.2 - 70.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.02X	1.77 - 3.04X
No. of Days Average Inventory Carried	180 Days	120 - 206 Days
Total Cost of Goods Sold to Ave Inventory	2.50X	2.00 - 3.49X
Whse Gross Margin Return on Ave Inventory	78%	72 - 94%
Turn & Earn Profitability Index	56%	46 - 72%
Percent of Firms on LIFO	55.56%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	42 - 51 Days
Gross Margin Return on Receivables	207%	197 - 243%
Aging of Receivable Dollars:		
Current	65.7%	54.0 - 77.0%
1-30 Days Past Due	13.5%	9.4 - 18.1%
31-60 Days Past Due	8.5%	3.7 - 13.7%
61-90 Days Past Due	8.2%	3.3 - 11.2%
Over 90 Days Past Due	4.0%	0.0 - 5.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$487	Insufficient Data
1-30 Days Past Due	$353	Insufficient Data
31-60 Days Past Due	$412	Insufficient Data
61-90 Days Past Due	$701	Insufficient Data
Over 90 Days Past Due	$711	Insufficient Data
Total	$509	Insufficient Data
Aging of Receivable Accounts:		
Current	77.6%	Insufficient Data
1-30 Days Past Due	11.4%	Insufficient Data
31-60 Days Past Due	6.2%	Insufficient Data
61-90 Days Past Due	2.5%	Insufficient Data
Over 90 Days Past Due	2.1%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.2%	70.3 - 76.4%
Gross Margin	27.6%	23.6 - 29.7%
Operating Expenses:		
Selling Expenses	7.4%	4.8 - 8.8%
Delivery Expenses	2.2%	1.2 - 2.4%
Warehouse Expenses	2.3%	1.4 - 3.2%
General & Administrative Expenses	10.2%	7.6 - 13.5%
Occupancy Expenses	2.0%	0.4 - 3.9%
Other Operating Expenses	0.3%	0.1 - 5.7%
Total Operating Expenses	25.9%	22.8 - 29.8%
Net Operating Profit	0.9%	-0.2 - 2.0%
Non-Operating Income	1.6%	1.1 - 1.9%
Non-Operating Expenses	1.7%	1.3 - 2.5%
Net Profit Before Tax	0.7%	-0.1 - 1.5%
Net Profit After Tax	0.5%	-0.2 - 1.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	25.9%	22.8 - 29.8%
Total Operating Expense to Gross Margin	96.8%	92.6 - 101.0%
Non-People Expense to Net Sales	9.3%	7.6 - 14.3%
Non-People Expense to Gross Margin	37.5%	30.9 - 42.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.5%
Times Interest Earned	1.5X	0.7 - 3.4X
BALANCE SHEET		
Cash	7.2%	1.3 - 16.2%
Accounts & Notes Receivable, Trade(Net)	21.1%	16.2 - 27.8%
Inventory	58.9%	51.3 - 67.6%
Other Current Assets	1.8%	0.1 - 3.6%
Total Current Assets	88.9%	83.8 - 92.5%
All Other Assets	11.1%	7.5 - 16.2%
Total Assets .	100.0%	100.0 - 100.0%
Total Current Liabilities	21.1%	13.3 - 25.6%
Total Long-Term Liabilities	18.3%	3.4 - 32.7%
Total Liabilities	39.5%	21.1 - 58.2%
Total Net Worth	60.5%	41.8 - 78.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.55%	3.97 - 9.02%
Total Assets to Net Worth	1.55X	1.32 - 2.11X
Net Profit After Tax to Total Assets	3.77%	1.72 - 6.65%
Net Sales to Total Assets	2.64X	2.12 - 3.00X
Net Profit After Tax to Net Sales	1.50%	0.60 - 3.00%
Net Profit Before Tax to Total Assets	6.29%	2.63 - 10.56%
EBIT to Total Assets	5.48%	3.65 - 10.16%
SALES ANALYSIS		
Net Sales ($000)	$4,209	$3,615 - 5,764
Percent Sales Change from Prior Year	17.55%	8.57 - 23.67%
Sales Mix:		
Direct Sales	5.2%	Insufficient Data
Warehouse Sales - Counter	36.3%	Insufficient Data
Warehouse Sales - Delivery	58.6%	Insufficient Data
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	43.3%	36.3 - 50.0%
Heating & Cooling Supplies & Equipment	23.2%	20.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	20.8%	15.0 - 25.0%
Other Industrial Supplies & Equipment	6.6%	0.0 - 10.8%
Other Products	6.2%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.9%	22.1 - 25.6%
Gross Margin on Direct Shipments	8.6%	7.8 - 11.3%
Gross Margin on Warehouse Sales	24.2%	23.3 - 26.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.97X	2.74 - 3.56X
Total Debt to Net Worth	55.2%	32.4 - 111.8%
Current Debt to Net Worth	52.9%	30.6 - 96.8%
Current Assets to Current Debt	2.65X	1.69 - 3.15X
Current Assets Minus Inventory/Curr Debt	1.46X	0.68 - 1.98X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.1 - 8.9
Average Invoice Size	$158	$155 - 217
Average Billing Line	$30.44	$16.68 - 36.20

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$163,227	$140,057 - 196,193
Gross Margin Per Employee	$36,840	$32,511 - 46,772
Average Compensation Per Employee	$18,201	$15,190 - 20,026
Average Fringe Benefits Per Employee	$3,698	$2,984 - 5,214
Compensation & Fringes Per Employee	$22,302	$18,922 - 23,930
Payroll to Net Sales	12.1%	10.8 - 14.0%
Fringe Benefits to Net Sales	2.5%	2.0 - 3.2%
Payroll & Fringes to Net Sales	15.6%	12.2 - 16.8%
Payroll to Gross Margin	50.9%	43.8 - 56.0%
Fringe Benefits to Gross Margin	10.3%	8.8 - 11.6%
Payroll & Fringes to Gross Margin	61.4%	53.8 - 65.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.51X	3.61 - 6.17X
No. of Days Average Inventory Carried	81 Days	60 - 101 Days
Total Cost of Goods Sold to Ave Inventory	5.03X	4.05 - 6.70X
Whse Gross Margin Return on Ave Inventory	132%	109 - 187%
Turn & Earn Profitability Index	101%	83 - 136%
Percent of Firms on LIFO	33.33%	
ACCOUNTS RECEIVABLE		
Average Collection Period	53 Days	37 - 64 Days
Gross Margin Return on Receivables	158%	Insufficient Data
Aging of Receivable Dollars:		
Current	61.8%	56.4 - 70.3%
1-30 Days Past Due	19.5%	13.1 - 25.0%
31-60 Days Past Due	9.2%	5.5 - 11.1%
61-90 Days Past Due	4.6%	3.2 - 5.0%
Over 90 Days Past Due	4.9%	1.6 - 4.8%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,105	Insufficient Data
1-30 Days Past Due	$1,021	$791 - 1,283
31-60 Days Past Due	$1,068	$879 - 2,114
61-90 Days Past Due	$992	Insufficient Data
Over 90 Days Past Due	$1,192	Insufficient Data
Total	$964	$943 - 1,384
Aging of Receivable Accounts:		
Current	58.3%	Insufficient Data
1-30 Days Past Due	21.0%	Insufficient Data
31-60 Days Past Due	10.5%	Insufficient Data
61-90 Days Past Due	4.7%	Insufficient Data
Over 90 Days Past Due	5.5%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.5%	74.3 - 77.9%
Gross Margin	23.9%	22.1 - 25.6%
Operating Expenses:		
Selling Expenses	6.1%	5.4 - 7.5%
Delivery Expenses	2.0%	1.4 - 2.9%
Warehouse Expenses	2.4%	1.7 - 2.8%
General & Administrative Expenses	8.4%	7.8 - 9.9%
Occupancy Expenses	2.5%	2.2 - 2.8%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	22.4%	21.2 - 24.7%
Net Operating Profit	0.7%	0.3 - 1.6%
Non-Operating Income	2.6%	2.0 - 3.1%
Non-Operating Expenses	1.4%	0.9 - 2.4%
Net Profit Before Tax	1.2%	0.8 - 2.7%
Net Profit After Tax	1.5%	0.6 - 3.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	21.2 - 24.7%
Total Operating Expense to Gross Margin	97.1%	92.5 - 98.7%
Non-People Expense to Net Sales	7.9%	6.9 - 8.6%
Non-People Expense to Gross Margin	34.3%	26.5 - 37.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.1%	0.0 - 0.8%
Times Interest Earned	17.1X	2.2 - 42.5X
BALANCE SHEET		
Cash	5.8%	0.8 - 11.5%
Accounts & Notes Receivable, Trade(Net)	36.3%	26.8 - 39.7%
Inventory	40.7%	31.8 - 52.0%
Other Current Assets	1.6%	0.1 - 2.6%
Total Current Assets	84.5%	74.5 - 93.9%
All Other Assets	15.5%	6.1 - 25.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	41.6%	29.4 - 51.6%
Total Long-Term Liabilities	4.9%	0.6 - 8.0%
Total Liabilities	46.6%	35.3 - 56.5%
Total Net Worth	53.4%	43.5 - 64.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.30%	2.51 - 15.70%
Total Assets to Net Worth	1.42X	1.35 - 2.05X
Net Profit After Tax to Total Assets	4.44%	1.44 - 9.21%
Net Sales to Total Assets	2.59X	2.14 - 3.01X
Net Profit After Tax to Net Sales	2.00%	0.60 - 2.90%
Net Profit Before Tax to Total Assets	6.41%	1.65 - 13.71%
EBIT to Total Assets	6.96%	2.32 - 14.97%
SALES ANALYSIS		
Net Sales ($000)	$14,186	$9,993 - 30,935
Percent Sales Change from Prior Year	11.06%	2.04 - 18.84%
Sales Mix:		
Direct Sales	15.1%	5.7 - 23.5%
Warehouse Sales - Counter	14.8%	6.6 - 20.7%
Warehouse Sales - Delivery	70.1%	57.0 - 81.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	39.1%	33.5 - 45.8%
Heating & Cooling Supplies & Equipment	17.9%	6.3 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	28.9%	20.0 - 41.5%
Other Industrial Supplies & Equipment	5.4%	0.0 - 10.8%
Other Products	8.6%	0.5 - 9.9%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	21.8%	18.8 - 25.2%
Gross Margin on Direct Shipments	11.0%	8.9 - 13.9%
Gross Margin on Warehouse Sales	24.1%	21.4 - 27.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.07X	2.56 - 3.55X
Total Debt to Net Worth	42.6%	35.3 - 104.7%
Current Debt to Net Worth	38.0%	26.5 - 71.6%
Current Assets to Current Debt	3.37X	2.32 - 4.19X
Current Assets Minus Inventory/Curr Debt	1.59X	1.00 - 2.20X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.6	4.0 - 5.1
Average Invoice Size	$185	$153 - 238
Average Billing Line	$41.10	$35.02 - 56.01

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$206,330	$174,394 - 227,915
Gross Margin Per Employee	$44,616	$41,693 - 54,532
Average Compensation Per Employee	$22,596	$18,224 - 25,485
Average Fringe Benefits Per Employee	$3,915	$3,477 - 4,938
Compensation & Fringes Per Employee	$26,739	$21,701 - 31,078
Payroll to Net Sales	11.2%	9.6 - 11.8%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.9%
Payroll & Fringes to Net Sales	13.7%	11.4 - 14.4%
Payroll to Gross Margin	49.0%	45.8 - 53.4%
Fringe Benefits to Gross Margin	9.9%	8.5 - 11.5%
Payroll & Fringes to Gross Margin	59.4%	56.1 - 62.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.49X	2.77 - 5.10X
No. of Days Average Inventory Carried	104 Days	72 - 131 Days
Total Cost of Goods Sold to Ave Inventory	4.80X	3.35 - 6.42X
Whse Gross Margin Return on Ave Inventory	109%	101 - 140%
Turn & Earn Profitability Index	85%	74 - 103%
Percent of Firms on LIFO	53.33%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	43 - 58 Days
Gross Margin Return on Receivables	160%	148 - 172%
Aging of Receivable Dollars:		
Current	64.1%	59.3 - 71.1%
1-30 Days Past Due	20.4%	18.0 - 23.5%
31-60 Days Past Due	8.1%	5.9 - 11.0%
61-90 Days Past Due	5.4%	2.5 - 8.0%
Over 90 Days Past Due	2.0%	0.0 - 3.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,585	$744 - 2,060
1-30 Days Past Due	$1,962	$1,709 - 2,366
31-60 Days Past Due	$1,775	$815 - 2,922
61-90 Days Past Due	$1,886	Insufficient Data
Over 90 Days Past Due	$1,207	Insufficient Data
Total	$1,552	$992 - 1,872
Aging of Receivable Accounts:		
Current	63.5%	Insufficient Data
1-30 Days Past Due	20.0%	Insufficient Data
31-60 Days Past Due	7.6%	Insufficient Data
61-90 Days Past Due	5.4%	Insufficient Data
Over 90 Days Past Due	3.4%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	77.5%	74.8 - 81.2%
Gross Margin	21.8%	18.8 - 25.2%
Operating Expenses:		
Selling Expenses	5.5%	4.1 - 6.5%
Delivery Expenses	1.6%	1.1 - 1.8%
Warehouse Expenses	2.9%	2.3 - 3.7%
General & Administrative Expenses	7.4%	5.6 - 10.1%
Occupancy Expenses	1.5%	1.1 - 2.5%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	19.9%	18.0 - 22.8%
Net Operating Profit	1.8%	0.4 - 4.7%
Non-Operating Income	2.5%	1.3 - 3.0%
Non-Operating Expenses	1.3%	0.9 - 1.9%
Net Profit Before Tax	2.9%	0.5 - 4.8%
Net Profit After Tax	2.0%	0.6 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	19.9%	18.0 - 22.8%
Total Operating Expense to Gross Margin	90.9%	81.1 - 98.3%
Non-People Expense to Net Sales	6.9%	5.7 - 8.3%
Non-People Expense to Gross Margin	32.9%	27.0 - 37.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.4 - 0.9%
Times Interest Earned	3.4X	1.6 - 8.5X
BALANCE SHEET		
Cash	6.3%	1.1 - 9.3%
Accounts & Notes Receivable, Trade(Net)	34.5%	30.1 - 41.0%
Inventory	43.4%	36.4 - 50.8%
Other Current Assets	0.7%	0.3 - 0.9%
Total Current Assets	84.9%	79.4 - 90.2%
All Other Assets	15.1%	9.7 - 20.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	27.6%	18.6 - 32.0%
Total Long-Term Liabilities	7.8%	0.5 - 13.8%
Total Liabilities	35.4%	25.7 - 43.6%
Total Net Worth	64.6%	56.4 - 74.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.04%	7.67 - 15.57%
Total Assets to Net Worth	1.51X	1.33 - 1.79X
Net Profit After Tax to Total Assets	6.08%	4.71 - 9.49%
Net Sales to Total Assets	2.74X	2.06 - 3.08X
Net Profit After Tax to Net Sales	2.60%	1.90 - 3.20%
Net Profit Before Tax to Total Assets	10.16%	6.47 - 14.65%
EBIT to Total Assets	11.14%	7.76 - 15.10%
SALES ANALYSIS		
Net Sales ($000)	$8,994	$4,287 - 24,700
Percent Sales Change from Prior Year	16.62%	9.08 - 20.10%
Sales Mix:		
Direct Sales	11.9%	2.6 - 19.1%
Warehouse Sales - Counter	18.5%	8.0 - 30.0%
Warehouse Sales - Delivery	69.6%	50.4 - 80.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	42.0%	35.4 - 50.0%
Heating & Cooling Supplies & Equipment	21.6%	12.8 - 30.4%
Industrial P-V-F (Pipes-Valves-Fittings)	22.8%	14.3 - 31.3%
Other Industrial Supplies & Equipment	5.9%	0.0 - 10.3%
Other Products	7.6%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.0%	21.6 - 25.9%
Gross Margin on Direct Shipments	10.9%	9.3 - 14.4%
Gross Margin on Warehouse Sales	25.0%	21.5 - 28.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.99X	2.68 - 3.63X
Total Debt to Net Worth	51.4%	33.0 - 79.3%
Current Debt to Net Worth	40.2%	27.8 - 77.7%
Current Assets to Current Debt	3.00X	2.28 - 3.80X
Current Assets Minus Inventory/Curr Debt	1.54X	1.23 - 2.17X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.1 - 6.5
Average Invoice Size	$163	$136 - 210
Average Billing Line	$32.07	$19.00 - 36.11

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$192,086	$160,482 - 220,289
Gross Margin Per Employee	$45,090	$38,898 - 49,310
Average Compensation Per Employee	$20,531	$17,418 - 23,777
Average Fringe Benefits Per Employee	$4,325	$3,761 - 7,174
Compensation & Fringes Per Employee	$25,289	$22,044 - 31,372
Payroll to Net Sales	11.6%	9.5 - 13.1%
Fringe Benefits to Net Sales	2.7%	2.0 - 3.4%
Payroll & Fringes to Net Sales	14.8%	11.3 - 16.8%
Payroll to Gross Margin	47.2%	43.4 - 50.4%
Fringe Benefits to Gross Margin	10.7%	8.5 - 12.2%
Payroll & Fringes to Gross Margin	58.7%	52.6 - 63.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.92X	3.29 - 6.42X
No. of Days Average Inventory Carried	74 Days	57 - 111 Days
Total Cost of Goods Sold to Ave Inventory	5.95X	3.48 - 6.95X
Whse Gross Margin Return on Ave Inventory	138%	102 - 202%
Turn & Earn Profitability Index	98%	78 - 150%
Percent of Firms on LIFO	44.44%	
ACCOUNTS RECEIVABLE		
Average Collection Period	55 Days	41 - 62 Days
Gross Margin Return on Receivables	166%	152 - 187%
Aging of Receivable Dollars:		
Current	60.8%	56.2 - 70.5%
1-30 Days Past Due	20.8%	16.6 - 25.1%
31-60 Days Past Due	9.1%	6.6 - 12.3%
61-90 Days Past Due	5.5%	2.8 - 8.6%
Over 90 Days Past Due	3.8%	0.0 - 4.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,067	Insufficient Data
1-30 Days Past Due	$1,152	Insufficient Data
31-60 Days Past Due	$1,420	Insufficient Data
61-90 Days Past Due	$1,223	Insufficient Data
Over 90 Days Past Due	$1,941	Insufficient Data
Total	$1,357	$977 - 1,712
Aging of Receivable Accounts:		
Current	52.8%	Insufficient Data
1-30 Days Past Due	22.8%	Insufficient Data
31-60 Days Past Due	10.3%	Insufficient Data
61-90 Days Past Due	6.5%	Insufficient Data
Over 90 Days Past Due	7.6%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.8%	74.1 - 78.4%
Gross Margin	24.0%	21.6 - 25.9%
Operating Expenses:		
Selling Expenses	6.0%	4.6 - 7.2%
Delivery Expenses	1.7%	1.3 - 2.4%
Warehouse Expenses	2.8%	2.5 - 3.5%
General & Administrative Expenses	7.8%	5.8 - 8.4%
Occupancy Expenses	2.2%	1.1 - 2.6%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	20.9%	18.8 - 22.9%
Net Operating Profit	3.4%	1.6 - 4.8%
Non-Operating Income	2.6%	1.5 - 3.0%
Non-Operating Expenses	1.2%	0.9 - 1.6%
Net Profit Before Tax	3.2%	2.7 - 5.3%
Net Profit After Tax	2.6%	1.9 - 3.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.9%	18.8 - 22.9%
Total Operating Expense to Gross Margin	87.0%	79.1 - 92.9%
Non-People Expense to Net Sales	6.8%	5.5 - 7.8%
Non-People Expense to Gross Margin	29.2%	22.0 - 32.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.1%	0.0 - 0.8%
Times Interest Earned	12.8X	5.4 - 76.9X
BALANCE SHEET		
Cash	8.5%	2.4 - 13.5%
Accounts & Notes Receivable, Trade(Net)	35.8%	26.5 - 42.9%
Inventory	39.3%	31.9 - 50.0%
Other Current Assets	0.6%	0.1 - 0.7%
Total Current Assets	84.2%	78.4 - 90.9%
All Other Assets	15.8%	9.1 - 21.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	30.6%	20.9 - 39.3%
Total Long-Term Liabilities	5.9%	0.0 - 13.5%
Total Liabilities	36.5%	25.8 - 42.0%
Total Net Worth	63.5%	58.0 - 74.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

HVAC & Other Emphasis Firms

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	5.92%	0.79 - 11.05%
Total Assets to Net Worth	1.87X	1.46 - 2.76X
Net Profit After Tax to Total Assets	2.70%	0.43 - 5.65%
Net Sales to Total Assets	2.16X	1.76 - 2.61X
Net Profit After Tax to Net Sales	1.20%	0.20 - 2.70%
Net Profit Before Tax to Total Assets	3.69%	0.65 - 8.10%
EBIT to Total Assets	6.59%	2.06 - 10.88%
SALES ANALYSIS		
Net Sales ($000)	$4,392	$2,865 - 10,990
Percent Sales Change from Prior Year	7.84%	-0.38 - 18.41%
Sales Mix:		
Direct Sales	7.7%	1.6 - 12.7%
Warehouse Sales - Counter	28.9%	11.6 - 39.0%
Warehouse Sales - Delivery	60.6%	46.4 - 80.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	29.2%	20.0 - 39.0%
Heating & Cooling Supplies & Equipment	24.3%	6.0 - 35.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.7%	0.0 - 10.0%
Other Industrial Supplies & Equipment	6.4%	0.0 - 10.0%
Other Products	32.4%	10.0 - 50.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.2%	23.0 - 28.3%
Gross Margin on Direct Shipments	14.0%	10.0 - 19.2%
Gross Margin on Warehouse Sales	26.1%	23.5 - 28.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.48X	2.03 - 2.92X
Total Debt to Net Worth	87.1%	45.6 - 170.1%
Current Debt to Net Worth	57.6%	27.3 - 125.5%
Current Assets to Current Debt	2.61X	1.83 - 3.99X
Current Assets Minus Inventory/Curr Debt	1.00X	0.67 - 1.83X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.0 - 7.9
Average Invoice Size	$140	$102 - 193
Average Billing Line	$22.76	$18.79 - 41.90

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$144,910	$117,556 - 175,133
Gross Margin Per Employee	$35,956	$30,220 - 46,443
Average Compensation Per Employee	$18,591	$15,339 - 21,517
Average Fringe Benefits Per Employee	$3,171	$2,651 - 4,443
Compensation & Fringes Per Employee	$21,323	$17,673 - 26,199
Payroll to Net Sales	12.7%	10.2 - 14.7%
Fringe Benefits to Net Sales	2.3%	1.6 - 3.2%
Payroll & Fringes to Net Sales	14.3%	10.7 - 16.8%
Payroll to Gross Margin	49.8%	42.5 - 55.0%
Fringe Benefits to Gross Margin	8.9%	6.8 - 10.9%
Payroll & Fringes to Gross Margin	56.6%	47.0 - 63.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.77X	2.10 - 3.83X
No. of Days Average Inventory Carried	132 Days	95 - 173 Days
Total Cost of Goods Sold to Ave Inventory	3.36X	2.64 - 4.37X
Whse Gross Margin Return on Ave Inventory	102%	73 - 128%
Turn & Earn Profitability Index	79%	62 - 94%
Percent of Firms on LIFO	57.38%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	40 - 59 Days
Gross Margin Return on Receivables	185%	150 - 239%
Aging of Receivable Dollars:		
Current	64.1%	56.4 - 73.6%
1-30 Days Past Due	16.0%	11.3 - 20.5%
31-60 Days Past Due	7.3%	4.3 - 9.5%
61-90 Days Past Due	5.8%	2.1 - 7.3%
Over 90 Days Past Due	6.8%	0.0 - 8.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$977	$652 - 1,567
1-30 Days Past Due	$1,047	$675 - 1,838
31-60 Days Past Due	$877	$615 - 1,876
61-90 Days Past Due	$1,271	$649 - 2,074
Over 90 Days Past Due	$1,536	$741 - 4,497
Total	$949	$684 - 1,473
Aging of Receivable Accounts:		
Current	71.6%	60.0 - 85.3%
1-30 Days Past Due	12.6%	7.0 - 16.3%
31-60 Days Past Due	6.4%	3.7 - 8.5%
61-90 Days Past Due	4.2%	1.4 - 6.8%
Over 90 Days Past Due	5.2%	0.5 - 6.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.5%	71.7 - 77.0%
Gross Margin	26.2%	23.0 - 28.3%
Operating Expenses:		
Selling Expenses	7.2%	5.5 - 8.4%
Delivery Expenses	1.8%	0.8 - 2.4%
Warehouse Expenses	2.3%	1.5 - 3.3%
General & Administrative Expenses	9.2%	8.1 - 11.6%
Occupancy Expenses	1.8%	1.4 - 2.6%
Other Operating Expenses	0.0%	0.0 - 0.5%
Total Operating Expenses	23.5%	20.4 - 27.9%
Net Operating Profit	2.4%	0.4 - 4.4%
Non-Operating Income	1.8%	0.9 - 2.5%
Non-Operating Expenses	1.8%	1.0 - 2.4%
Net Profit Before Tax	2.1%	0.2 - 4.8%
Net Profit After Tax	1.2%	0.2 - 2.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.5%	20.4 - 27.9%
Total Operating Expense to Gross Margin	92.0%	83.8 - 98.5%
Non-People Expense to Net Sales	8.4%	7.1 - 9.3%
Non-People Expense to Gross Margin	32.3%	26.3 - 38.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.2%	0.4 - 2.1%
Times Interest Earned	2.4X	1.1 - 4.8X
BALANCE SHEET		
Cash	7.9%	0.6 - 9.9%
Accounts & Notes Receivable, Trade(Net)	26.4%	21.5 - 33.7%
Inventory	49.1%	43.6 - 53.7%
Other Current Assets	1.4%	0.2 - 1.8%
Total Current Assets	84.7%	79.0 - 92.6%
All Other Assets	15.3%	7.4 - 21.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.0%	21.6 - 48.9%
Total Long-Term Liabilities	11.1%	1.1 - 17.0%
Total Liabilities	48.1%	31.6 - 59.3%
Total Net Worth	51.9%	40.7 - 68.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	3.24%	0.13 - 12.99%
Total Assets to Net Worth	2.43X	1.25 - 3.22X
Net Profit After Tax to Total Assets	1.18%	0.07 - 7.08%
Net Sales to Total Assets	2.01X	1.65 - 2.47X
Net Profit After Tax to Net Sales	0.50%	0.00 - 2.80%
Net Profit Before Tax to Total Assets	1.52%	0.14 - 8.32%
EBIT to Total Assets	4.27%	1.52 - 11.82%
SALES ANALYSIS		
Net Sales($000)	$2,052	$1,216 - 2,874
Percent Sales Change from Prior Year	2.44%	-7.03 - 9.34%
Sales Mix:		
Direct Sales	3.4%	0.4 - 5.7%
Warehouse Sales - Counter	44.1%	18.9 - 72.3%
Warehouse Sales - Delivery	52.5%	22.7 - 77.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	30.0%	22.5 - 43.0%
Heating & Cooling Supplies & Equipment	28.6%	10.0 - 37.5%
Industrial P-V-F (Pipes-Valves-Fittings)	8.4%	0.0 - 12.5%
Other Industrial Supplies & Equipment	5.3%	0.0 - 10.0%
Other Products	27.7%	0.0 - 49.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.6%	25.8 - 30.2%
Gross Margin on Direct Shipments	17.1%	12.0 - 25.0%
Gross Margin on Warehouse Sales	27.3%	25.8 - 28.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.26X	1.99 - 2.65X
Total Debt to Net Worth	111.4%	22.1 - 212.0%
Current Debt to Net Worth	82.7%	16.3 - 172.7%
Current Assets to Current Debt	2.27X	1.75 - 7.00X
Current Assets Minus Inventory/Curr Debt	0.80X	0.48 - 1.98X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.0 - 7.0
Average Invoice Size	$127	$82 - 256
Average Billing Line	$22.50	$15.32 - 43.23

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$123,649	$76,582 - 145,430
Gross Margin Per Employee	$32,827	$23,783 - 42,554
Average Compensation Per Employee	$16,083	$12,123 - 21,322
Average Fringe Benefits Per Employee	$3,104	$2,621 - 3,952
Compensation & Fringes Per Employee	$18,164	$11,772 - 23,167
Payroll to Net Sales	14.7%	12.7 - 15.6%
Fringe Benefits to Net Sales	2.6%	1.8 - 3.4%
Payroll & Fringes to Net Sales	15.1%	0.0 - 17.5%
Payroll to Gross Margin	52.5%	42.3 - 56.7%
Fringe Benefits to Gross Margin	9.1%	6.9 - 11.8%
Payroll & Fringes to Gross Margin	50.8%	0.0 - 63.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.08X	1.61 - 2.77X
No. of Days Average Inventory Carried	175 Days	132 - 226 Days
Total Cost of Goods Sold to Ave Inventory	2.74X	2.01 - 4.21X
Whse Gross Margin Return on Ave Inventory	92%	55 - 118%
Turn & Earn Profitability Index	67%	42 - 79%
Percent of Firms on LIFO	44.44%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	34 - 64 Days
Gross Margin Return on Receivables	213%	Insufficient Data
Aging of Receivable Dollars:		
Current	61.6%	53.0 - 79.3%
1-30 Days Past Due	17.2%	8.7 - 19.3%
31-60 Days Past Due	7.3%	2.7 - 8.3%
61-90 Days Past Due	6.3%	2.7 - 9.0%
Over 90 Days Past Due	7.7%	0.0 - 5.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$672	$531 - 1,754
1-30 Days Past Due	$711	$600 - 1,850
31-60 Days Past Due	$702	$482 - 991
61-90 Days Past Due	$1,298	$489 - 2,074
Over 90 Days Past Due	$1,680	$718 - 4,600
Total	$909	$624 - 1,569
Aging of Receivable Accounts:		
Current	68.2%	61.5 - 80.6%
1-30 Days Past Due	13.1%	6.8 - 18.3%
31-60 Days Past Due	6.7%	4.1 - 9.0%
61-90 Days Past Due	5.4%	1.8 - 9.5%
Over 90 Days Past Due	6.5%	0.2 - 9.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.2%	69.8 - 74.2%
Gross Margin	28.6%	25.8 - 30.2%
Operating Expenses:		
Selling Expenses	5.5%	2.9 - 7.1%
Delivery Expenses	1.8%	0.6 - 2.9%
Warehouse Expenses	1.6%	1.3 - 3.2%
General & Administrative Expenses	13.7%	9.5 - 18.9%
Occupancy Expenses	2.6%	1.5 - 3.4%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	25.6%	24.3 - 31.8%
Net Operating Profit	2.5%	-0.5 - 5.0%
Non-Operating Income	2.2%	1.3 - 2.5%
Non-Operating Expenses	2.6%	1.0 - 3.4%
Net Profit Before Tax	0.3%	-0.4 - 6.1%
Net Profit After Tax	0.5%	0.0 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	25.6%	24.3 - 31.8%
Total Operating Expense to Gross Margin	90.5%	82.8 - 102.1%
Non-People Expense to Net Sales	9.7%	8.5 - 12.4%
Non-People Expense to Gross Margin	32.3%	31.8 - 36.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.4%	0.2 - 2.4%
Times Interest Earned	1.8X	0.8 - 4.5X
BALANCE SHEET		
Cash	7.5%	0.3 - 11.2%
Accounts & Notes Receivable, Trade(Net)	22.0%	17.1 - 28.3%
Inventory	58.4%	50.7 - 67.1%
Other Current Assets	0.7%	0.1 - 1.0%
Total Current Assets	88.6%	84.3 - 96.4%
All Other Assets	11.4%	3.6 - 15.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	41.0%	18.7 - 50.0%
Total Long-Term Liabilities	13.1%	1.5 - 27.8%
Total Liabilities	54.1%	33.5 - 71.4%
Total Net Worth	45.9%	28.6 - 66.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	5.68%	0.45 - 12.30%
Total Assets to Net Worth	1.83X	1.33 - 2.62X
Net Profit After Tax to Total Assets	2.17%	0.33 - 5.78%
Net Sales to Total Assets	2.11X	1.76 - 2.63X
Net Profit After Tax to Net Sales	1.00%	0.10 - 3.40%
Net Profit Before Tax to Total Assets	2.96%	0.43 - 8.47%
EBIT to Total Assets	5.38%	2.51 - 10.49%
SALES ANALYSIS		
Net Sales ($000)	$4,406	$3,689 - 5,171
Percent Sales Change from Prior Year	9.23%	0.01 - 16.77%
Sales Mix:		
Direct Sales	5.9%	1.6 - 10.0%
Warehouse Sales - Counter	21.8%	9.5 - 28.1%
Warehouse Sales - Delivery	72.2%	58.5 - 85.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	31.1%	19.8 - 40.0%
Heating & Cooling Supplies & Equipment	26.6%	11.5 - 45.0%
Industrial P-V-F (Pipes-Valves-Fittings)	10.5%	0.0 - 20.0%
Other Industrial Supplies & Equipment	9.2%	0.0 - 16.3%
Other Products	22.6%	0.0 - 37.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.5%	24.0 - 32.8%
Gross Margin on Direct Shipments	15.2%	10.4 - 20.8%
Gross Margin on Warehouse Sales	27.2%	23.6 - 29.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.54X	2.00 - 2.92X
Total Debt to Net Worth	83.1%	32.3 - 161.8%
Current Debt to Net Worth	57.0%	26.9 - 150.0%
Current Assets to Current Debt	2.68X	1.62 - 4.10X
Current Assets Minus Inventory/Curr Debt	1.07X	0.69 - 1.82X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.5	4.8 - 8.5
Average Invoice Size	$129	$93 - 174
Average Billing Line	$21.61	$15.27 - 29.64

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$138,638	$113,474 - 167,044
Gross Margin Per Employee	$35,956	$29,556 - 53,119
Average Compensation Per Employee	$19,089	$15,413 - 21,510
Average Fringe Benefits Per Employee	$3,179	$2,589 - 5,700
Compensation & Fringes Per Employee	$22,317	$18,196 - 26,532
Payroll to Net Sales	13.2%	11.8 - 14.2%
Fringe Benefits to Net Sales	2.3%	2.0 - 3.8%
Payroll & Fringes to Net Sales	15.5%	13.3 - 17.7%
Payroll to Gross Margin	50.5%	44.1 - 55.7%
Fringe Benefits to Gross Margin	9.1%	8.3 - 12.3%
Payroll & Fringes to Gross Margin	58.1%	53.9 - 64.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.07X	2.37 - 4.10X
No. of Days Average Inventory Carried	119 Days	89 - 154 Days
Total Cost of Goods Sold to Ave Inventory	3.79X	2.62 - 4.47X
Whse Gross Margin Return on Ave Inventory	121%	84 - 153%
Turn & Earn Profitability Index	90%	71 - 117%
Percent of Firms on LIFO	45.45%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	41 - 59 Days
Gross Margin Return on Receivables	216%	168 - 257%
Aging of Receivable Dollars:		
Current	66.2%	59.2 - 71.8%
1-30 Days Past Due	12.7%	7.4 - 19.0%
31-60 Days Past Due	7.5%	4.3 - 10.4%
61-90 Days Past Due	5.3%	1.9 - 7.7%
Over 90 Days Past Due	8.2%	1.1 - 10.9%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$758	$642 - 1,066
1-30 Days Past Due	$843	$664 - 1,703
31-60 Days Past Due	$897	$422 - 1,522
61-90 Days Past Due	$1,102	$497 - 1,647
Over 90 Days Past Due	$1,789	$809 - 4,722
Total	$812	$652 - 1,121
Aging of Receivable Accounts:		
Current	82.2%	76.8 - 88.6%
1-30 Days Past Due	9.4%	6.2 - 14.5%
31-60 Days Past Due	4.0%	2.5 - 5.0%
61-90 Days Past Due	2.0%	1.1 - 3.5%
Over 90 Days Past Due	2.3%	0.1 - 4.6%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	72.5%	67.2 - 76.0%
Gross Margin	28.5%	24.0 - 32.8%
Operating Expenses:		
Selling Expenses	8.0%	6.9 - 10.8%
Delivery Expenses	2.0%	1.6 - 2.9%
Warehouse Expenses	2.7%	2.1 - 3.6%
General & Administrative Expenses	9.0%	8.4 - 9.9%
Occupancy Expenses	2.0%	0.8 - 2.6%
Other Operating Expenses	0.1%	0.0 - 1.0%
Total Operating Expenses	24.6%	22.4 - 29.9%
Net Operating Profit	1.9%	0.5 - 4.9%
Non-Operating Income	1.9%	1.1 - 2.7%
Non-Operating Expenses	1.6%	0.9 - 2.3%
Net Profit Before Tax	1.6%	0.2 - 6.6%
Net Profit After Tax	1.0%	0.1 - 3.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.6%	22.4 - 29.9%
Total Operating Expense to Gross Margin	92.7%	83.2 - 98.7%
Non-People Expense to Net Sales	8.7%	7.7 - 10.2%
Non-People Expense to Gross Margin	32.8%	23.8 - 39.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 2.4%
Times Interest Earned	1.5X	1.1 - 4.2X
BALANCE SHEET		
Cash	8.9%	0.7 - 9.6%
Accounts & Notes Receivable, Trade(Net)	28.0%	24.1 - 34.5%
Inventory	46.8%	42.5 - 52.9%
Other Current Assets	1.2%	0.2 - 1.8%
Total Current Assets	85.0%	78.5 - 91.5%
All Other Assets	15.0%	8.5 - 21.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.8%	21.5 - 51.6%
Total Long-Term Liabilities	8.2%	0.1 - 15.9%
Total Liabilities	45.0%	23.5 - 61.5%
Total Net Worth	55.0%	38.5 - 76.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.88%	2.35 - 9.60%
Total Assets to Net Worth	1.83X	1.48 - 2.18X
Net Profit After Tax to Total Assets	4.10%	1.25 - 5.14%
Net Sales to Total Assets	2.25X	1.78 - 2.62X
Net Profit After Tax to Net Sales	1.90%	0.50 - 2.30%
Net Profit Before Tax to Total Assets	6.14%	1.62 - 8.01%
EBIT to Total Assets	8.09%	4.86 - 10.31%
SALES ANALYSIS		
Net Sales($000)	$17,875	$11,536 - 31,501
Percent Sales Change from Prior Year	17.35%	1.94 - 19.63%
Sales Mix:		
Direct Sales	13.2%	7.4 - 19.7%
Warehouse Sales - Counter	28.3%	16.6 - 35.9%
Warehouse Sales - Delivery	58.5%	51.9 - 74.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	25.6%	18.8 - 32.8%
Heating & Cooling Supplies & Equipment	16.5%	0.0 - 27.3%
Industrial P-V-F (Pipes-Valves-Fittings)	3.1%	0.0 - 4.3%
Other Industrial Supplies & Equipment	3.9%	0.0 - 6.0%
Other Products	50.9%	37.3 - 63.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	22.3%	20.2 - 23.8%
Gross Margin on Direct Shipments	11.3%	9.6 - 14.1%
Gross Margin on Warehouse Sales	23.5%	21.2 - 26.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.72X	2.19 - 2.94X
Total Debt to Net Worth	75.9%	47.9 - 118.0%
Current Debt to Net Worth	50.8%	35.8 - 86.3%
Current Assets to Current Debt	2.76X	1.97 - 3.33X
Current Assets Minus Inventory/Curr Debt	1.01X	0.86 - 1.71X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.7	3.6 - 8.0
Average Invoice Size	$161	$116 - 217
Average Billing Line	$32.95	$20.10 - 57.22

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$175,126	$148,055 - 217,987
Gross Margin Per Employee	$39,990	$34,142 - 49,374
Average Compensation Per Employee	$19,534	$17,009 - 22,079
Average Fringe Benefits Per Employee	$3,157	$2,657 - 4,214
Compensation & Fringes Per Employee	$22,766	$19,533 - 26,745
Payroll to Net Sales	10.2%	8.9 - 12.3%
Fringe Benefits to Net Sales	1.6%	1.4 - 2.5%
Payroll & Fringes to Net Sales	11.9%	10.6 - 14.5%
Payroll to Gross Margin	43.9%	40.5 - 53.8%
Fringe Benefits to Gross Margin	7.5%	6.3 - 9.9%
Payroll & Fringes to Gross Margin	52.7%	46.6 - 63.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.25X	2.30 - 3.86X
No. of Days Average Inventory Carried	112 Days	94 - 159 Days
Total Cost of Goods Sold to Ave Inventory	3.66X	2.88 - 4.71X
Whse Gross Margin Return on Ave Inventory	92%	84 - 118%
Turn & Earn Profitability Index	67%	64 - 87%
Percent of Firms on LIFO	80.95%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	41 - 55 Days
Gross Margin Return on Receivables	160%	129 - 186%
Aging of Receivable Dollars:		
Current	63.5%	56.6 - 73.6%
1-30 Days Past Due	18.8%	15.7 - 21.6%
31-60 Days Past Due	7.1%	5.2 - 9.9%
61-90 Days Past Due	5.9%	1.9 - 7.8%
Over 90 Days Past Due	4.7%	0.0 - 7.9%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,321	$1,086 - 1,997
1-30 Days Past Due	$1,770	$1,115 - 1,877
31-60 Days Past Due	$1,927	$770 - 2,699
61-90 Days Past Due	$2,160	Insufficient Data
Over 90 Days Past Due	$885	Insufficient Data
Total	$1,473	$1,320 - 2,312
Aging of Receivable Accounts:		
Current	63.2%	50.0 - 72.4%
1-30 Days Past Due	15.7%	14.1 - 19.7%
31-60 Days Past Due	8.7%	5.2 - 9.3%
61-90 Days Past Due	5.2%	1.4 - 8.2%
Over 90 Days Past Due	7.2%	1.9 - 14.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	77.4%	76.2 - 79.8%
Gross Margin	22.3%	20.2 - 23.8%
Operating Expenses:		
Selling Expenses	6.1%	4.4 - 8.5%
Delivery Expenses	1.2%	0.7 - 1.8%
Warehouse Expenses	2.0%	1.2 - 3.0%
General & Administrative Expenses	8.5%	5.9 - 11.5%
Occupancy Expenses	1.5%	1.3 - 1.9%
Other Operating Expenses	0.0%	0.0 - 0.1%
Total Operating Expenses	20.4%	18.1 - 22.2%
Net Operating Profit	2.3%	0.4 - 3.8%
Non-Operating Income	1.5%	0.7 - 2.6%
Non-Operating Expenses	1.8%	1.1 - 2.2%
Net Profit Before Tax	2.8%	0.5 - 3.2%
Net Profit After Tax	1.9%	0.5 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.4%	18.1 - 22.2%
Total Operating Expense to Gross Margin	90.5%	83.9 - 98.2%
Non-People Expense to Net Sales	7.1%	5.9 - 8.4%
Non-People Expense to Gross Margin	30.9%	26.2 - 38.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.2%	0.4 - 1.5%
Times Interest Earned	3.2X	1.7 - 8.3X
BALANCE SHEET		
Cash	7.2%	0.6 - 11.3%
Accounts & Notes Receivable, Trade(Net)	27.7%	23.1 - 33.1%
Inventory	44.9%	40.4 - 52.0%
Other Current Assets	2.1%	0.4 - 2.7%
Total Current Assets	81.9%	77.2 - 92.6%
All Other Assets	18.1%	7.4 - 22.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.5%	19.1 - 46.5%
Total Long-Term Liabilities	12.4%	2.9 - 19.3%
Total Liabilities	47.0%	31.6 - 57.9%
Total Net Worth	53.0%	42.1 - 68.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.76%	7.93 - 13.13%
Total Assets to Net Worth	1.87X	1.45 - 2.42X
Net Profit After Tax to Total Assets	5.67%	4.18 - 7.40%
Net Sales to Total Assets	2.16X	1.76 - 2.67X
Net Profit After Tax to Net Sales	2.70%	2.00 - 3.60%
Net Profit Before Tax to Total Assets	8.10%	6.58 - 11.91%
EBIT to Total Assets	10.96%	8.68 - 12.59%
SALES ANALYSIS		
Net Sales($000)	$4,610	$2,989 - 13,435
Percent Sales Change from Prior Year	16.77%	2.48 - 25.78%
Sales Mix:		
Direct Sales	7.8%	1.7 - 13.3%
Warehouse Sales - Counter	35.5%	18.3 - 56.8%
Warehouse Sales - Delivery	56.7%	40.9 - 78.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	28.9%	20.3 - 35.0%
Heating & Cooling Supplies & Equipment	24.9%	5.3 - 42.3%
Industrial P-V-F (Pipes-Valves-Fittings)	6.3%	0.0 - 10.0%
Other Industrial Supplies & Equipment	5.1%	0.0 - 7.5%
Other Products	34.9%	4.6 - 53.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.4%	23.5 - 31.3%
Gross Margin on Direct Shipments	12.0%	9.7 - 15.4%
Gross Margin on Warehouse Sales	27.5%	23.8 - 28.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.52X	2.04 - 2.95X
Total Debt to Net Worth	86.7%	45.9 - 141.8%
Current Debt to Net Worth	51.0%	32.4 - 98.8%
Current Assets to Current Debt	2.84X	2.10 - 3.73X
Current Assets Minus Inventory/Curr Debt	1.13X	0.84 - 1.64X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.8	3.3 - 9.5
Average Invoice Size	$141	$104 - 304
Average Billing Line	$24.13	$19.92 - 42.50

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$150,018	$128,821 - 195,526
Gross Margin Per Employee	$40,689	$33,312 - 53,350
Average Compensation Per Employee	$19,278	$15,985 - 21,604
Average Fringe Benefits Per Employee	$3,529	$2,686 - 4,797
Compensation & Fringes Per Employee	$22,234	$16,895 - 26,417
Payroll to Net Sales	12.7%	9.5 - 14.0%
Fringe Benefits to Net Sales	2.5%	1.5 - 3.0%
Payroll & Fringes to Net Sales	14.3%	10.1 - 16.8%
Payroll to Gross Margin	44.0%	40.5 - 50.8%
Fringe Benefits to Gross Margin	8.9%	6.4 - 11.0%
Payroll & Fringes to Gross Margin	51.4%	45.8 - 59.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.25X	2.19 - 3.91X
No. of Days Average Inventory Carried	112 Days	93 - 166 Days
Total Cost of Goods Sold to Ave Inventory	3.47X	2.73 - 4.89X
Whse Gross Margin Return on Ave Inventory	118%	99 - 133%
Turn & Earn Profitability Index	85%	71 - 99%
Percent of Firms on LIFO	60.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	40 - 54 Days
Gross Margin Return on Receivables	211%	177 - 239%
Aging of Receivable Dollars:		
Current	63.9%	56.3 - 73.7%
1-30 Days Past Due	17.2%	11.0 - 20.2%
31-60 Days Past Due	8.3%	4.4 - 10.6%
61-90 Days Past Due	6.5%	2.3 - 7.7%
Over 90 Days Past Due	4.0%	0.0 - 6.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,040	$710 - 1,865
1-30 Days Past Due	$1,508	$638 - 1,896
31-60 Days Past Due	$1,620	$688 - 2,227
61-90 Days Past Due	$1,963	$1,201 - 2,651
Over 90 Days Past Due	$1,689	$825 - 6,999
Total	$1,286	$715 - 1,959
Aging of Receivable Accounts:		
Current	75.7%	66.6 - 87.5%
1-30 Days Past Due	11.6%	6.8 - 15.5%
31-60 Days Past Due	5.3%	2.6 - 8.2%
61-90 Days Past Due	3.8%	1.3 - 6.9%
Over 90 Days Past Due	3.5%	0.0 - 5.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.2%	68.7 - 76.5%
Gross Margin	27.4%	23.5 - 31.3%
Operating Expenses:		
Selling Expenses	5.6%	4.3 - 7.9%
Delivery Expenses	1.7%	0.7 - 2.6%
Warehouse Expenses	2.3%	1.6 - 3.6%
General & Administrative Expenses	9.8%	8.2 - 13.2%
Occupancy Expenses	1.6%	1.2 - 2.2%
Other Operating Expenses	0.0%	0.0 - 0.5%
Total Operating Expenses	22.9%	18.8 - 25.4%
Net Operating Profit	3.9%	2.7 - 5.3%
Non-Operating Income	2.2%	0.9 - 2.7%
Non-Operating Expenses	1.5%	0.9 - 2.4%
Net Profit Before Tax	4.0%	2.9 - 6.5%
Net Profit After Tax	2.7%	2.0 - 3.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.9%	18.8 - 25.4%
Total Operating Expense to Gross Margin	85.1%	79.5 - 89.6%
Non-People Expense to Net Sales	8.1%	6.1 - 9.1%
Non-People Expense to Gross Margin	28.0%	23.9 - 33.2%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.4 - 1.4%
Times Interest Earned	4.0X	3.2 - 11.5X
BALANCE SHEET		
Cash	9.5%	3.0 - 8.8%
Accounts & Notes Receivable, Trade(Net)	27.2%	22.5 - 33.4%
Inventory	47.8%	42.0 - 53.9%
Other Current Assets	0.8%	0.1 - 1.0%
Total Current Assets	85.3%	78.6 - 92.2%
All Other Assets	14.7%	7.8 - 21.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	33.2%	20.9 - 47.9%
Total Long-Term Liabilities	10.2%	0.2 - 17.5%
Total Liabilities	43.4%	28.1 - 56.3%
Total Net Worth	56.6%	43.7 - 71.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

All Reporting Firms

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.25%	1.37 - 11.17%
Total Assets to Net Worth	1.81X	1.44 - 2.63X
Net Profit After Tax to Total Assets	3.07%	0.61 - 5.73%
Net Sales to Total Assets	2.36X	1.96 - 2.82X
Net Profit After Tax to Net Sales	1.30%	0.30 - 2.60%
Net Profit Before Tax to Total Assets	4.37%	0.84 - 8.53%
EBIT to Total Assets	6.17%	3.27 - 10.86%
SALES ANALYSIS		
Net Sales ($000)	$4,422	$2,950 - 10,082
Percent Sales Change from Prior Year	10.48%	0.65 - 21.04%
Sales Mix:		
Direct Sales	10.3%	3.0 - 14.2%
Warehouse Sales - Counter	29.8%	8.2 - 40.4%
Warehouse Sales - Delivery	59.4%	47.3 - 80.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	51.2%	32.0 - 73.5%
Heating & Cooling Supplies & Equipment	15.0%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	20.1%	0.0 - 25.8%
Other Industrial Supplies & Equipment	3.6%	0.0 - 5.0%
Other Products	10.1%	0.0 - 12.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.8%	21.6 - 27.2%
Gross Margin on Direct Shipments	11.6%	8.6 - 15.7%
Gross Margin on Warehouse Sales	25.6%	23.2 - 28.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.75X	2.25 - 3.29X
Total Debt to Net Worth	78.4%	43.5 - 155.1%
Current Debt to Net Worth	62.9%	32.6 - 115.0%
Current Assets to Current Debt	2.56X	1.82 - 3.65X
Current Assets Minus Inventory/Curr Debt	1.06X	0.76 - 1.62X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.4	4.4 - 7.2
Average Invoice Size	$151	$112 - 235
Average Billing Line	$27.82	$18.63 - 44.69

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$167,380	$134,417 - 202,041
Gross Margin Per Employee	$40,682	$34,191 - 47,953
Average Compensation Per Employee	$20,164	$17,243 - 23,339
Average Fringe Benefits Per Employee	$3,588	$2,693 - 4,897
Compensation & Fringes Per Employee	$23,743	$20,423 - 27,244
Payroll to Net Sales	12.1%	10.3 - 13.7%
Fringe Benefits to Net Sales	2.2%	1.6 - 2.9%
Payroll & Fringes to Net Sales	14.1%	11.6 - 16.4%
Payroll to Gross Margin	49.2%	44.6 - 54.3%
Fringe Benefits to Gross Margin	8.9%	7.0 - 11.3%
Payroll & Fringes to Gross Margin	57.8%	51.7 - 63.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.32X	2.42 - 4.49X
No. of Days Average Inventory Carried	110 Days	81 - 151 Days
Total Cost of Goods Sold to Ave Inventory	3.81X	2.78 - 5.25X
Whse Gross Margin Return on Ave Inventory	114%	85 - 152%
Turn & Earn Profitability Index	84%	65 - 114%
Percent of Firms on LIFO	53.28%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	43 - 59 Days
Gross Margin Return on Receivables	176%	145 - 219%
Aging of Receivable Dollars:		
Current	63.9%	55.7 - 72.6%
1-30 Days Past Due	17.5%	13.0 - 22.0%
31-60 Days Past Due	7.5%	4.1 - 10.0%
61-90 Days Past Due	5.6%	2.0 - 7.3%
Over 90 Days Past Due	5.5%	0.0 - 7.8%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,178	$740 - 1,843
1-30 Days Past Due	$1,150	$703 - 2,039
31-60 Days Past Due	$1,010	$619 - 1,986
61-90 Days Past Due	$1,143	$589 - 2,018
Over 90 Days Past Due	$1,455	$860 - 2,406
Total	$1,188	$785 - 1,795
Aging of Receivable Accounts:		
Current	66.4%	56.9 - 77.4%
1-30 Days Past Due	16.8%	9.4 - 22.0%
31-60 Days Past Due	7.6%	4.5 - 9.3%
61-90 Days Past Due	5.0%	2.1 - 6.8%
Over 90 Days Past Due	4.2%	0.3 - 5.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.7%	72.8 - 78.4%
Gross Margin	24.8%	21.6 - 27.2%
Operating Expenses:		
Selling Expenses	6.1%	5.0 - 8.0%
Delivery Expenses	1.7%	1.2 - 2.4%
Warehouse Expenses	2.5%	1.7 - 3.5%
General & Administrative Expenses	8.8%	7.0 - 10.9%
Occupancy Expenses	1.8%	1.3 - 2.6%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	22.4%	19.7 - 25.6%
Net Operating Profit	1.8%	0.5 - 3.5%
Non-Operating Income	2.0%	1.2 - 2.7%
Non-Operating Expenses	1.8%	1.1 - 2.6%
Net Profit Before Tax	1.7%	0.3 - 3.7%
Net Profit After Tax	1.3%	0.3 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	19.7 - 25.6%
Total Operating Expense to Gross Margin	92.7%	85.3 - 97.9%
Non-People Expense to Net Sales	8.0%	6.3 - 9.7%
Non-People Expense to Gross Margin	33.5%	27.1 - 38.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.3 - 1.6%
Times Interest Earned	2.8X	1.3 - 7.2X
BALANCE SHEET		
Cash	5.7%	0.9 - 8.6%
Accounts & Notes Receivable, Trade(Net)	30.6%	23.5 - 36.9%
Inventory	48.1%	40.5 - 55.9%
Other Current Assets	1.8%	0.2 - 1.6%
Total Current Assets	85.7%	81.2 - 93.3%
All Other Assets	13.9%	6.7 - 18.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.3%	22.7 - 46.8%
Total Long-Term Liabilities	10.5%	0.7 - 14.5%
Total Liabilities	47.7%	31.5 - 61.1%
Total Net Worth	52.3%	38.9 - 68.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

All Firms by Geographic Region

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW ENGLAND (CT, ME, MA, NH, RI, VT)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.96%	3.54 - 11.26%
Total Assets to Net Worth	1.59X	1.36 - 2.36X
Net Profit After Tax to Total Assets	4.09%	1.61 - 7.69%
Net Sales to Total Assets	2.30X	1.66 - 2.60X
Net Profit After Tax to Net Sales	2.00%	0.70 - 3.70%
Net Profit Before Tax to Total Assets	4.85%	2.11 - 11.47%
EBIT to Total Assets	7.91%	4.07 - 11.66%
SALES ANALYSIS		
Net Sales ($000)	$4,428	$2,965 - 10,150
Percent Sales Change from Prior Year	17.21%	3.73 - 23.91%
Sales Mix:		
Direct Sales	6.4%	0.0 - 8.4%
Warehouse Sales - Counter	21.3%	3.9 - 33.1%
Warehouse Sales - Delivery	72.4%	59.5 - 92.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	48.3%	28.0 - 67.0%
Heating & Cooling Supplies & Equipment	20.3%	0.0 - 32.5%
Industrial P-V-F (Pipes-Valves-Fittings)	23.6%	0.0 - 25.0%
Other Industrial Supplies & Equipment	3.1%	0.0 - 7.5%
Other Products	4.8%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.0%	23.7 - 29.2%
Gross Margin on Direct Shipments	9.0%	6.5 - 15.5%
Gross Margin on Warehouse Sales	24.9%	23.6 - 28.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.57X	2.04 - 2.90X
Total Debt to Net Worth	58.7%	36.0 - 135.9%
Current Debt to Net Worth	41.9%	29.3 - 97.5%
Current Assets to Current Debt	3.14X	1.90 - 4.12X
Current Assets Minus Inventory/Curr Debt	1.05X	0.85 - 2.15X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	4.8 - 8.8
Average Invoice Size	$128	$101 - 279
Average Billing Line	$24.84	$17.07 - 39.76

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW ENGLAND (CT, ME, MA, NH, RI, VT)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$164,013	$134,265 - 209,721
Gross Margin Per Employee	$45,981	$36,214 - 53,063
Average Compensation Per Employee	$20,402	$18,216 - 24,357
Average Fringe Benefits Per Employee	$3,627	$3,245 - 5,134
Compensation & Fringes Per Employee	$24,375	$20,275 - 26,928
Payroll to Net Sales	12.1%	11.0 - 14.1%
Fringe Benefits to Net Sales	2.7%	1.9 - 3.0%
Payroll & Fringes to Net Sales	14.3%	12.9 - 17.0%
Payroll to Gross Margin	46.8%	43.4 - 51.1%
Fringe Benefits to Gross Margin	9.3%	7.6 - 11.5%
Payroll & Fringes to Gross Margin	56.2%	49.9 - 60.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.56X	2.29 - 5.07X
No. of Days Average Inventory Carried	103 Days	72 - 159 Days
Total Cost of Goods Sold to Ave Inventory	3.85X	2.58 - 5.47X
Whse Gross Margin Return on Ave Inventory	130%	91 - 158%
Turn & Earn Profitability Index	84%	61 - 122%
Percent of Firms on LIFO	32.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	55 Days	48 - 63 Days
Gross Margin Return on Receivables	191%	157 - 226%
Aging of Receivable Dollars:		
Current	59.8%	50.4 - 66.1%
1-30 Days Past Due	20.6%	19.0 - 25.7%
31-60 Days Past Due	9.0%	5.3 - 10.7%
61-90 Days Past Due	5.2%	2.2 - 5.6%
Over 90 Days Past Due	5.4%	2.2 - 8.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,474	$1,161 - 1,917
1-30 Days Past Due	$1,980	$865 - 2,988
31-60 Days Past Due	$1,448	$843 - 1,953
61-90 Days Past Due	$1,050	$700 - 1,853
Over 90 Days Past Due	$1,206	$1,014 - 1,692
Total	$1,393	$1,168 - 2,044
Aging of Receivable Accounts:		
Current	59.7%	52.9 - 64.0%
1-30 Days Past Due	18.1%	9.2 - 26.2%
31-60 Days Past Due	9.1%	5.8 - 11.5%
61-90 Days Past Due	6.8%	2.9 - 8.6%
Over 90 Days Past Due	6.3%	2.4 - 10.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW ENGLAND (CT, ME, MA, NH, RI, VT)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.5%	70.8 - 76.3%
Gross Margin	27.0%	23.7 - 29.2%
Operating Expenses:		
Selling Expenses	5.9%	5.1 - 7.8%
Delivery Expenses	2.6%	1.5 - 3.9%
Warehouse Expenses	3.0%	1.8 - 4.0%
General & Administrative Expenses	8.2%	7.1 - 11.1%
Occupancy Expenses	2.3%	1.6 - 3.2%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	22.0%	20.9 - 29.0%
Net Operating Profit	2.9%	0.6 - 5.3%
Non-Operating Income	2.1%	0.9 - 2.6%
Non-Operating Expenses	1.0%	0.4 - 1.3%
Net Profit Before Tax	3.3%	1.1 - 6.3%
Net Profit After Tax	2.0%	0.7 - 3.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.0%	20.9 - 29.0%
Total Operating Expense to Gross Margin	89.6%	82.5 - 97.5%
Non-People Expense to Net Sales	8.4%	6.6 - 11.3%
Non-People Expense to Gross Margin	33.8%	24.4 - 40.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.1 - 1.1%
Times Interest Earned	4.0X	1.6 - 18.8X
BALANCE SHEET		
Cash	7.6%	1.3 - 17.1%
Accounts & Notes Receivable, Trade(Net)	29.9%	19.5 - 39.5%
Inventory	47.7%	40.7 - 52.7%
Other Current Assets	1.2%	0.3 - 1.4%
Total Current Assets	86.4%	79.9 - 92.6%
All Other Assets	13.6%	7.4 - 20.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	32.0%	22.2 - 39.8%
Total Long-Term Liabilities	6.9%	0.2 - 12.5%
Total Liabilities	38.9%	26.4 - 48.0%
Total Net Worth	61.1%	52.0 - 73.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW YORK STATE (EXCLUDING NYC)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	7.96%	2.35 - 10.93%
Total Assets to Net Worth	1.57X	1.32 - 2.43X
Net Profit After Tax to Total Assets	2.70%	1.72 - 6.65%
Net Sales to Total Assets	2.24X	1.98 - 2.88X
Net Profit After Tax to Net Sales	1.20%	0.70 - 2.30%
Net Profit Before Tax to Total Assets	3.53%	2.26 - 9.59%
EBIT to Total Assets	7.17%	4.05 - 10.85%
SALES ANALYSIS		
Net Sales($000)	$5,129	$3,287 - 7,166
Percent Sales Change from Prior Year	10.37%	-1.31 - 16.77%
Sales Mix:		
Direct Sales	10.1%	4.7 - 20.0%
Warehouse Sales - Counter	27.3%	18.0 - 45.3%
Warehouse Sales - Delivery	62.6%	50.0 - 77.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	44.5%	35.0 - 59.0%
Heating & Cooling Supplies & Equipment	23.8%	7.5 - 37.5%
Industrial P-V-F (Pipes-Valves-Fittings)	11.3%	0.0 - 22.0%
Other Industrial Supplies & Equipment	4.5%	0.0 - 7.0%
Other Products	15.8%	1.0 - 17.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.7%	23.8 - 27.3%
Gross Margin on Direct Shipments	10.1%	7.1 - 15.5%
Gross Margin on Warehouse Sales	26.9%	24.6 - 29.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.87X	2.00 - 3.12X
Total Debt to Net Worth	56.7%	31.5 - 142.5%
Current Debt to Net Worth	53.5%	28.9 - 130.5%
Current Assets to Current Debt	2.81X	1.57 - 3.20X
Current Assets Minus Inventory/Curr Debt	1.14X	0.67 - 1.62X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.6	4.5 - 9.4
Average Invoice Size	$139	$119 - 157
Average Billing Line	$22.24	$14.14 - 34.28

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW YORK STATE (EXCLUDING NYC)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$130,590	$105,410 - 145,733
Gross Margin Per Employee	$32,612	$26,844 - 37,546
Average Compensation Per Employee	$14,947	$12,998 - 19,280
Average Fringe Benefits Per Employee	$2,979	$1,933 - 3,709
Compensation & Fringes Per Employee	$18,135	$15,013 - 22,537
Payroll to Net Sales	12.7%	10.8 - 13.8%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.8%
Payroll & Fringes to Net Sales	14.8%	12.1 - 16.8%
Payroll to Gross Margin	49.4%	40.4 - 56.3%
Fringe Benefits to Gross Margin	8.6%	6.4 - 10.5%
Payroll & Fringes to Gross Margin	58.4%	48.7 - 64.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.37X	1.99 - 4.09X
No. of Days Average Inventory Carried	154 Days	89 - 187 Days
Total Cost of Goods Sold to Ave Inventory	4.08X	2.56 - 6.75X
Whse Gross Margin Return on Ave Inventory	85%	74 - 143%
Turn & Earn Profitability Index	62%	52 - 106%
Percent of Firms on LIFO	46.67%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	42 - 67 Days
Gross Margin Return on Receivables	195%	120 - 219%
Aging of Receivable Dollars:		
Current	60.2%	54.1 - 72.5%
1-30 Days Past Due	18.6%	12.6 - 24.8%
31-60 Days Past Due	9.4%	5.6 - 10.0%
61-90 Days Past Due	6.5%	2.7 - 9.3%
Over 90 Days Past Due	5.3%	0.2 - 9.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$835	$616 - 1,295
1-30 Days Past Due	$741	Insufficient Data
31-60 Days Past Due	$879	$363 - 936
61-90 Days Past Due	$741	$324 - 1,245
Over 90 Days Past Due	$993	Insufficient Data
Total	$876	$744 - 1,113
Aging of Receivable Accounts:		
Current	50.3%	Insufficient Data
1-30 Days Past Due	26.6%	Insufficient Data
31-60 Days Past Due	9.3%	Insufficient Data
61-90 Days Past Due	5.3%	Insufficient Data
Over 90 Days Past Due	8.5%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NEW YORK STATE (EXCLUDING NYC)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.6%	72.7 - 76.2%
Gross Margin	25.7%	23.8 - 27.3%
Operating Expenses:		
Selling Expenses	7.5%	6.2 - 9.9%
Delivery Expenses	2.9%	1.8 - 3.4%
Warehouse Expenses	2.5%	2.1 - 3.5%
General & Administrative Expenses	8.6%	5.2 - 10.1%
Occupancy Expenses	1.6%	0.7 - 2.9%
Other Operating Expenses	0.2%	0.0 - 0.4%
Total Operating Expenses	23.0%	21.9 - 26.2%
Net Operating Profit	2.1%	1.1 - 3.1%
Non-Operating Income	1.2%	0.8 - 2.4%
Non-Operating Expenses	1.5%	0.9 - 2.3%
Net Profit Before Tax	1.7%	1.0 - 2.9%
Net Profit After Tax	1.2%	0.7 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.0%	21.9 - 26.2%
Total Operating Expense to Gross Margin	91.4%	87.0 - 96.2%
Non-People Expense to Net Sales	8.7%	7.8 - 10.0%
Non-People Expense to Gross Margin	34.7%	31.1 - 41.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.1 - 1.6%
Times Interest Earned	4.2X	1.4 - 57.6X
BALANCE SHEET		
Cash	2.8%	0.3 - 3.7%
Accounts & Notes Receivable, Trade(Net)	30.2%	20.3 - 35.7%
Inventory	52.0%	48.4 - 62.5%
Other Current Assets	2.7%	0.4 - 4.6%
Total Current Assets	87.6%	80.1 - 94.5%
All Other Assets	12.4%	5.5 - 19.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.6%	24.5 - 48.6%
Total Long-Term Liabilities	3.7%	0.0 - 7.1%
Total Liabilities	40.4%	27.1 - 55.7%
Total Net Worth	59.6%	44.3 - 72.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MIDDLE ATLANTIC (DE, EASTERN PA, MD, NJ, WA. DC)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	7.10%	2.49 - 10.33%
Total Assets to Net Worth	1.85X	1.42 - 2.39X
Net Profit After Tax to Total Assets	3.69%	1.14 - 5.94%
Net Sales to Total Assets	2.18X	1.47 - 3.14X
Net Profit After Tax to Net Sales	1.70%	0.60 - 3.00%
Net Profit Before Tax to Total Assets	5.35%	1.78 - 9.45%
EBIT to Total Assets	5.79%	3.57 - 9.53%
SALES ANALYSIS		
Net Sales ($000)	$4,557	$2,614 - 9,204
Percent Sales Change from Prior Year	10.94%	2.77 - 22.77%
Sales Mix:		
Direct Sales	6.3%	1.7 - 13.3%
Warehouse Sales - Counter	25.4%	7.1 - 34.3%
Warehouse Sales - Delivery	68.3%	52.0 - 86.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	50.4%	33.3 - 70.8%
Heating & Cooling Supplies & Equipment	19.7%	5.5 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	16.0%	0.0 - 13.8%
Other Industrial Supplies & Equipment	3.3%	0.0 - 3.0%
Other Products	10.6%	0.0 - 14.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.7%	21.6 - 28.6%
Gross Margin on Direct Shipments	12.1%	9.0 - 20.3%
Gross Margin on Warehouse Sales	27.7%	23.5 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.69X	1.76 - 3.47X
Total Debt to Net Worth	84.9%	42.1 - 139.5%
Current Debt to Net Worth	55.8%	25.2 - 128.0%
Current Assets to Current Debt	2.61X	2.07 - 4.64X
Current Assets Minus Inventory/Curr Debt	1.30X	0.79 - 2.16X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.2	4.3 - 10.0
Average Invoice Size	$140	$99 - 244
Average Billing Line	$23.28	$20.78 - 39.30

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MIDDLE ATLANTIC (DE, EASTERN PA, MD, NJ, WA. DC)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$152,780	$131,535 - 179,959
Gross Margin Per Employee	$38,830	$33,660 - 45,035
Average Compensation Per Employee	$20,102	$16,919 - 22,538
Average Fringe Benefits Per Employee	$3,920	$2,860 - 5,390
Compensation & Fringes Per Employee	$24,335	$19,340 - 27,205
Payroll to Net Sales	12.5%	10.3 - 14.4%
Fringe Benefits to Net Sales	2.5%	2.1 - 3.0%
Payroll & Fringes to Net Sales	14.4%	12.2 - 17.5%
Payroll to Gross Margin	46.5%	44.6 - 55.0%
Fringe Benefits to Gross Margin	10.5%	7.5 - 12.3%
Payroll & Fringes to Gross Margin	56.6%	52.3 - 65.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.68X	2.45 - 5.63X
No. of Days Average Inventory Carried	78 Days	65 - 149 Days
Total Cost of Goods Sold to Ave Inventory	4.74X	2.55 - 5.77X
Whse Gross Margin Return on Ave Inventory	151%	94 - 196%
Turn & Earn Profitability Index	117%	66 - 145%
Percent of Firms on LIFO	30.77%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	42 - 59 Days
Gross Margin Return on Receivables	195%	162 - 228%
Aging of Receivable Dollars:		
Current	66.9%	54.8 - 77.5%
1-30 Days Past Due	16.0%	10.3 - 22.6%
31-60 Days Past Due	6.9%	2.6 - 9.8%
61-90 Days Past Due	5.2%	1.7 - 6.5%
Over 90 Days Past Due	4.9%	0.0 - 8.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$870	$609 - 1,506
1-30 Days Past Due	$802	$509 - 1,928
31-60 Days Past Due	$715	$377 - 1,742
61-90 Days Past Due	$1,103	$405 - 2,500
Over 90 Days Past Due	$1,509	$740 - 5,352
Total	$923	$685 - 1,930
Aging of Receivable Accounts:		
Current	69.6%	52.3 - 83.8%
1-30 Days Past Due	16.7%	6.7 - 24.1%
31-60 Days Past Due	6.6%	3.6 - 9.0%
61-90 Days Past Due	3.7%	1.9 - 4.6%
Over 90 Days Past Due	3.4%	0.0 - 5.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MIDDLE ATLANTIC (DE, EASTERN PA, MD, NJ, WA. DC)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.3%	71.4 - 78.4%
Gross Margin	25.7%	21.6 - 28.6%
Operating Expenses:		
Selling Expenses	6.4%	4.8 - 8.0%
Delivery Expenses	1.9%	1.5 - 2.4%
Warehouse Expenses	2.2%	1.1 - 3.4%
General & Administrative Expenses	10.1%	7.6 - 12.4%
Occupancy Expenses	1.5%	1.0 - 2.4%
Other Operating Expenses	0.0%	0.0 - 0.4%
Total Operating Expenses	22.1%	20.0 - 27.2%
Net Operating Profit	1.6%	0.8 - 2.9%
Non-Operating Income	1.5%	0.4 - 2.7%
Non-Operating Expenses	1.4%	1.0 - 1.9%
Net Profit Before Tax	1.5%	0.5 - 5.9%
Net Profit After Tax	1.7%	0.6 - 3.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.1%	20.0 - 27.2%
Total Operating Expense to Gross Margin	93.6%	87.1 - 96.0%
Non-People Expense to Net Sales	7.7%	5.8 - 8.8%
Non-People Expense to Gross Margin	29.6%	22.6 - 37.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.4 - 1.0%
Times Interest Earned	4.8X	1.7 - 10.6X
BALANCE SHEET		
Cash	11.5%	1.6 - 16.8%
Accounts & Notes Receivable, Trade(Net)	29.3%	17.2 - 39.6%
Inventory	41.9%	32.0 - 46.1%
Other Current Assets	1.6%	0.8 - 2.2%
Total Current Assets	84.3%	78.2 - 89.7%
All Other Assets	15.7%	10.3 - 21.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	31.5%	17.7 - 39.4%
Total Long-Term Liabilities	10.4%	0.7 - 17.0%
Total Liabilities	41.8%	24.0 - 58.2%
Total Net Worth	58.2%	41.8 - 76.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: EAST CENTRAL (IN, OH, WESTERN PA, WV)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	4.10%	-0.03 - 9.98%
Total Assets to Net Worth	2.26X	1.46 - 3.01X
Net Profit After Tax to Total Assets	1.39%	-0.09 - 4.96%
Net Sales to Total Assets	2.35X	1.87 - 2.66X
Net Profit After Tax to Net Sales	0.70%	0.00 - 2.20%
Net Profit Before Tax to Total Assets	2.16%	-0.17 - 6.71%
EBIT to Total Assets	5.77%	2.35 - 9.44%
SALES ANALYSIS		
Net Sales ($000)	$3,832	$2,347 - 8,543
Percent Sales Change from Prior Year	9.23%	-0.41 - 20.44%
Sales Mix:		
Direct Sales	10.4%	4.0 - 15.4%
Warehouse Sales - Counter	33.4%	7.7 - 57.6%
Warehouse Sales - Delivery	56.2%	39.4 - 79.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	44.2%	28.5 - 60.1%
Heating & Cooling Supplies & Equipment	13.3%	2.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	25.4%	5.0 - 38.5%
Other Industrial Supplies & Equipment	5.6%	0.0 - 7.2%
Other Products	11.4%	0.0 - 22.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.0%	21.9 - 28.2%
Gross Margin on Direct Shipments	12.0%	10.0 - 14.9%
Gross Margin on Warehouse Sales	25.8%	23.6 - 28.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.66X	2.20 - 3.16X
Total Debt to Net Worth	111.0%	44.4 - 179.4%
Current Debt to Net Worth	74.8%	27.3 - 135.5%
Current Assets to Current Debt	2.39X	1.77 - 3.90X
Current Assets Minus Inventory/Curr Debt	0.94X	0.72 - 1.50X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.9	3.6 - 6.0
Average Invoice Size	$132	$86 - 213
Average Billing Line	$29.04	$16.67 - 52.64

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: EAST CENTRAL (IN, OH, WESTERN PA, WV)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$147,469	$126,707 - 171,582
Gross Margin Per Employee	$36,550	$31,856 - 41,077
Average Compensation Per Employee	$18,496	$16,429 - 21,056
Average Fringe Benefits Per Employee	$3,410	$2,698 - 4,413
Compensation & Fringes Per Employee	$22,274	$20,368 - 24,993
Payroll to Net Sales	12.4%	10.9 - 14.1%
Fringe Benefits to Net Sales	2.4%	1.7 - 3.0%
Payroll & Fringes to Net Sales	14.6%	12.8 - 16.8%
Payroll to Gross Margin	51.0%	46.9 - 55.6%
Fringe Benefits to Gross Margin	9.2%	7.5 - 11.6%
Payroll & Fringes to Gross Margin	58.5%	54.5 - 65.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.05X	2.48 - 3.83X
No. of Days Average Inventory Carried	119 Days	95 - 147 Days
Total Cost of Goods Sold to Ave Inventory	3.73X	2.67 - 4.43X
Whse Gross Margin Return on Ave Inventory	112%	82 - 147%
Turn & Earn Profitability Index	78%	58 - 112%
Percent of Firms on LIFO	65.12%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	46 - 58 Days
Gross Margin Return on Receivables	175%	146 - 225%
Aging of Receivable Dollars:		
Current	59.9%	54.6 - 69.2%
1-30 Days Past Due	19.2%	13.5 - 20.9%
31-60 Days Past Due	8.7%	4.6 - 11.3%
61-90 Days Past Due	6.4%	2.5 - 9.1%
Over 90 Days Past Due	5.8%	0.0 - 8.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,032	$548 - 1,519
1-30 Days Past Due	$1,069	$651 - 1,992
31-60 Days Past Due	$1,046	$370 - 2,114
61-90 Days Past Due	$1,157	$701 - 2,010
Over 90 Days Past Due	$1,099	$737 - 2,378
Total	$1,041	$642 - 1,429
Aging of Receivable Accounts:		
Current	65.5%	60.5 - 75.9%
1-30 Days Past Due	17.0%	10.5 - 21.0%
31-60 Days Past Due	7.9%	4.5 - 8.7%
61-90 Days Past Due	6.0%	2.4 - 7.9%
Over 90 Days Past Due	3.6%	0.0 - 5.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: EAST CENTRAL (IN, OH, WESTERN PA, WV)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.2%	71.8 - 78.1%
Gross Margin	25.0%	21.9 - 28.2%
Operating Expenses:		
Selling Expenses	6.6%	5.3 - 7.6%
Delivery Expenses	1.7%	1.2 - 2.3%
Warehouse Expenses	2.6%	2.0 - 3.2%
General & Administrative Expenses	9.3%	7.5 - 11.8%
Occupancy Expenses	2.2%	1.5 - 2.7%
Other Operating Expenses	0.0%	0.0 - 1.0%
Total Operating Expenses	23.7%	20.6 - 26.0%
Net Operating Profit	1.0%	-0.1 - 2.8%
Non-Operating Income	2.1%	1.3 - 2.7%
Non-Operating Expenses	1.9%	1.2 - 2.8%
Net Profit Before Tax	0.9%	-0.2 - 2.8%
Net Profit After Tax	0.7%	0.0 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.7%	20.6 - 26.0%
Total Operating Expense to Gross Margin	96.0%	89.9 - 100.6%
Non-People Expense to Net Sales	8.6%	7.5 - 9.7%
Non-People Expense to Gross Margin	35.0%	32.5 - 38.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.2%	0.5 - 1.8%
Times Interest Earned	1.6X	0.9 - 4.5X
BALANCE SHEET		
Cash	4.3%	0.6 - 9.3%
Accounts & Notes Receivable, Trade(Net)	30.2%	22.4 - 36.8%
Inventory	50.4%	42.7 - 59.9%
Other Current Assets	2.2%	0.4 - 2.7%
Total Current Assets	84.5%	84.9 - 93.2%
All Other Assets	12.9%	6.8 - 15.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.0%	21.7 - 50.7%
Total Long-Term Liabilities	14.4%	0.1 - 16.3%
Total Liabilities	50.4%	29.1 - 69.6%
Total Net Worth	49.6%	30.4 - 70.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: SOUTHERN (AL, FL, GA, KY, MS, NC, SC, TN, VA)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.20%	0.79 - 12.89%
Total Assets to Net Worth	1.73X	1.44 - 2.26X
Net Profit After Tax to Total Assets	4.13%	0.65 - 7.07%
Net Sales to Total Assets	2.66X	2.13 - 3.10X
Net Profit After Tax to Net Sales	1.20%	0.30 - 2.30%
Net Profit Before Tax to Total Assets	4.22%	0.74 - 9.34%
EBIT to Total Assets	6.35%	2.11 - 12.15%
SALES ANALYSIS		
Net Sales($000)	$5,619	$3,472 - 12,082
Percent Sales Change from Prior Year	18.25%	6.64 - 26.94%
Sales Mix:		
Direct Sales	18.2%	10.0 - 23.7%
Warehouse Sales - Counter	31.7%	6.1 - 34.7%
Warehouse Sales - Delivery	50.1%	48.3 - 62.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	55.1%	24.8 - 85.0%
Heating & Cooling Supplies & Equipment	8.3%	0.0 - 11.3%
Industrial P-V-F (Pipes-Valves-Fittings)	20.9%	0.0 - 18.5%
Other Industrial Supplies & Equipment	3.2%	0.0 - 5.0%
Other Products	12.4%	0.0 - 21.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	20.9%	18.9 - 22.5%
Gross Margin on Direct Shipments	12.0%	9.4 - 15.9%
Gross Margin on Warehouse Sales	22.0%	21.2 - 26.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.20X	2.25 - 3.49X
Total Debt to Net Worth	73.4%	44.4 - 125.5%
Current Debt to Net Worth	66.7%	26.5 - 98.4%
Current Assets to Current Debt	2.26X	1.93 - 3.65X
Current Assets Minus Inventory/Curr Debt	0.95X	0.79 - 1.48X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 9.0
Average Invoice Size	$170	$116 - 303
Average Billing Line	$26.24	$16.05 - 61.05

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: SOUTHERN (AL, FL, GA, KY, MS, NC, SC, TN, VA)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$171,575	$134,803 - 218,327
Gross Margin Per Employee	$39,117	$28,478 - 41,861
Average Compensation Per Employee	$18,905	$17,186 - 23,698
Average Fringe Benefits Per Employee	$3,030	$2,185 - 4,218
Compensation & Fringes Per Employee	$21,420	$19,106 - 27,740
Payroll to Net Sales	10.8%	9.4 - 13.1%
Fringe Benefits to Net Sales	1.6%	1.3 - 2.3%
Payroll & Fringes to Net Sales	12.1%	10.6 - 14.2%
Payroll to Gross Margin	51.2%	44.8 - 58.5%
Fringe Benefits to Gross Margin	7.8%	6.1 - 9.9%
Payroll & Fringes to Gross Margin	56.9%	52.7 - 64.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.55X	2.41 - 4.17X
No. of Days Average Inventory Carried	103 Days	87 - 151 Days
Total Cost of Goods Sold to Ave Inventory	4.85X	2.84 - 5.40X
Whse Gross Margin Return on Ave Inventory	105%	70 - 118%
Turn & Earn Profitability Index	82%	52 - 92%
Percent of Firms on LIFO	57.92%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	41 - 58 Days
Gross Margin Return on Receivables	140%	126 - 182%
Aging of Receivable Dollars:		
Current	68.0%	61.3 - 74.7%
1-30 Days Past Due	14.0%	9.9 - 18.4%
31-60 Days Past Due	6.1%	3.6 - 7.3%
61-90 Days Past Due	6.1%	1.3 - 9.6%
Over 90 Days Past Due	5.9%	0.0 - 10.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,300	$796 - 2,765
1-30 Days Past Due	$1,675	$906 - 4,645
31-60 Days Past Due	$1,329	$708 - 2,003
61-90 Days Past Due	$1,543	$691 - 5,562
Over 90 Days Past Due	$1,985	$1,243 - 5,783
Total	$1,637	$937 - 2,907
Aging of Receivable Accounts:		
Current	70.0%	57.6 - 84.7%
1-30 Days Past Due	16.1%	8.5 - 26.9%
31-60 Days Past Due	7.2%	3.5 - 10.4%
61-90 Days Past Due	4.3%	1.2 - 6.8%
Over 90 Days Past Due	2.5%	0.0 - 2.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: SOUTHERN (AL, FL, GA, KY, MS, NC, SC, TN, VA)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	79.5%	77.5 - 81.1%
Gross Margin	20.9%	18.9 - 22.5%
Operating Expenses:		
Selling Expenses	5.7%	5.0 - 7.6%
Delivery Expenses	1.6%	1.1 - 2.4%
Warehouse Expenses	1.8%	1.1 - 2.4%
General & Administrative Expenses	7.1%	5.8 - 10.0%
Occupancy Expenses	1.5%	0.9 - 1.7%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	19.0%	15.7 - 21.9%
Net Operating Profit	2.1%	-0.5 - 3.5%
Non-Operating Income	2.2%	1.3 - 2.5%
Non-Operating Expenses	1.9%	1.4 - 2.1%
Net Profit Before Tax	1.5%	-0.2 - 3.6%
Net Profit After Tax	1.2%	0.3 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	19.0%	15.7 - 21.9%
Total Operating Expense to Gross Margin	89.9%	80.2 - 102.0%
Non-People Expense to Net Sales	6.3%	5.5 - 8.0%
Non-People Expense to Gross Margin	32.1%	26.3 - 35.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.3 - 1.1%
Times Interest Earned	4.7X	1.3 - 10.1X
BALANCE SHEET		
Cash	4.9%	0.5 - 10.1%
Accounts & Notes Receivable, Trade(Net)	30.6%	23.7 - 39.1%
Inventory	48.2%	43.4 - 59.2%
Other Current Assets	1.1%	0.1 - 1.3%
Total Current Assets	84.7%	83.7 - 92.0%
All Other Assets	15.3%	8.0 - 16.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.3%	27.2 - 43.3%
Total Long-Term Liabilities	8.4%	0.4 - 17.4%
Total Liabilities	44.8%	36.7 - 53.5%
Total Net Worth	55.2%	46.5 - 63.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MICHIGAN (EXCLUDING UPPER MI)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	2.49%	-1.41 - 4.84%
Total Assets to Net Worth	1.64X	1.41 - 2.16X
Net Profit After Tax to Total Assets	1.68%	-0.69 - 3.05%
Net Sales to Total Assets	2.14X	1.83 - 2.46X
Net Profit After Tax to Net Sales	0.70%	-0.30 - 1.40%
Net Profit Before Tax to Total Assets	2.16%	-0.34 - 5.38%
EBIT to Total Assets	4.10%	0.76 - 7.39%
SALES ANALYSIS		
Net Sales($000)	$3,868	$2,142 - 5,905
Percent Sales Change from Prior Year	5.25%	-1.71 - 21.65%
Sales Mix:		
Direct Sales	7.2%	0.5 - 13.1%
Warehouse Sales - Counter	26.4%	8.7 - 30.5%
Warehouse Sales - Delivery	66.3%	61.3 - 81.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	44.9%	13.8 - 63.5%
Heating & Cooling Supplies & Equipment	12.8%	0.0 - 21.3%
Industrial P-V-F (Pipes-Valves-Fittings)	31.2%	0.0 - 52.8%
Other Industrial Supplies & Equipment	3.4%	0.0 - 6.3%
Other Products	7.7%	0.0 - 12.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.2%	24.0 - 25.4%
Gross Margin on Direct Shipments	12.4%	Insufficient Data
Gross Margin on Warehouse Sales	26.9%	25.2 - 28.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.45X	2.26 - 2.87X
Total Debt to Net Worth	63.8%	41.2 - 116.7%
Current Debt to Net Worth	46.2%	31.8 - 77.8%
Current Assets to Current Debt	3.00X	2.22 - 4.50X
Current Assets Minus Inventory/Curr Debt	1.09X	0.71 - 1.48X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.8	3.3 - 6.5
Average Invoice Size	$155	$112 - 241
Average Billing Line	$30.95	$17.54 - 58.42

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MICHIGAN (EXCLUDING UPPER MI)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$148,777	$140,746 - 209,146
Gross Margin Per Employee	$41,438	$33,684 - 48,600
Average Compensation Per Employee	$20,758	$17,251 - 23,268
Average Fringe Benefits Per Employee	$3,702	$3,159 - 5,954
Compensation & Fringes Per Employee	$24,464	$20,464 - 27,618
Payroll to Net Sales	13.7%	11.5 - 14.8%
Fringe Benefits to Net Sales	2.9%	2.3 - 3.5%
Payroll & Fringes to Net Sales	15.9%	14.5 - 17.3%
Payroll to Gross Margin	52.5%	47.1 - 55.6%
Fringe Benefits to Gross Margin	12.3%	8.7 - 13.8%
Payroll & Fringes to Gross Margin	62.1%	59.6 - 67.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.09X	2.02 - 3.34X
No. of Days Average Inventory Carried	118 Days	109 - 181 Days
Total Cost of Goods Sold to Ave Inventory	3.28X	2.59 - 3.65X
Whse Gross Margin Return on Ave Inventory	105%	78 - 129%
Turn & Earn Profitability Index	79%	53 - 92%
Percent of Firms on LIFO	50.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	57 Days	41 - 65 Days
Gross Margin Return on Receivables	181%	143 - 248%
Aging of Receivable Dollars:		
Current	59.7%	52.6 - 67.5%
1-30 Days Past Due	17.3%	13.4 - 20.3%
31-60 Days Past Due	8.2%	6.0 - 10.2%
61-90 Days Past Due	6.4%	3.8 - 8.8%
Over 90 Days Past Due	8.3%	0.0 - 15.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,063	$593 - 1,862
1-30 Days Past Due	$1,406	$916 - 1,951
31-60 Days Past Due	$1,228	$759 - 2,128
61-90 Days Past Due	$1,299	$941 - 2,181
Over 90 Days Past Due	$1,977	Insufficient Data
Total	$943	$791 - 1,438
Aging of Receivable Accounts:		
Current	66.2%	62.0 - 69.7%
1-30 Days Past Due	17.6%	14.2 - 22.1%
31-60 Days Past Due	7.2%	5.3 - 9.2%
61-90 Days Past Due	4.2%	1.3 - 5.9%
Over 90 Days Past Due	4.8%	0.0 - 9.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MICHIGAN (EXCLUDING UPPER MI)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.2%	74.6 - 76.0%
Gross Margin	25.2%	24.0 - 25.4%
Operating Expenses:		
Selling Expenses	8.5%	6.8 - 9.4%
Delivery Expenses	2.0%	1.5 - 2.5%
Warehouse Expenses	2.8%	1.7 - 3.8%
General & Administrative Expenses	9.6%	5.6 - 11.0%
Occupancy Expenses	2.0%	1.0 - 2.8%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	24.6%	22.8 - 26.7%
Net Operating Profit	0.8%	-0.8 - 1.8%
Non-Operating Income	1.6%	0.5 - 2.5%
Non-Operating Expenses	2.1%	0.8 - 2.9%
Net Profit Before Tax	0.5%	-0.1 - 1.4%
Net Profit After Tax	0.7%	-0.3 - 1.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.6%	22.8 - 26.7%
Total Operating Expense to Gross Margin	96.8%	93.1 - 103.2%
Non-People Expense to Net Sales	9.2%	7.5 - 11.8%
Non-People Expense to Gross Margin	36.4%	29.6 - 47.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.1 - 1.5%
Times Interest Earned	1.7X	0.4 - 3.4X
BALANCE SHEET		
Cash	3.1%	1.3 - 4.4%
Accounts & Notes Receivable, Trade(Net)	27.0%	20.7 - 32.3%
Inventory	52.5%	41.9 - 63.6%
Other Current Assets	0.6%	0.2 - 1.2%
Total Current Assets	83.3%	71.1 - 95.1%
All Other Assets	16.7%	4.9 - 28.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	30.9%	19.1 - 42.3%
Total Long-Term Liabilities	12.5%	1.2 - 18.6%
Total Liabilities	43.4%	30.7 - 57.8%
Total Net Worth	56.6%	42.2 - 69.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: METRO CHICAGO & NORTHERN IL

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	3.30%	-9.46 - 5.94%
Total Assets to Net Worth	1.72X	1.48 - 5.11X
Net Profit After Tax to Total Assets	2.42%	-9.63 - 3.11%
Net Sales to Total Assets	2.18X	1.53 - 2.40X
Net Profit After Tax to Net Sales	1.00%	-4.90 - 1.30%
Net Profit Before Tax to Total Assets	3.02%	-9.63 - 4.01%
EBIT to Total Assets	4.76%	-6.70 - 7.01%
SALES ANALYSIS		
Net Sales($000)	$3,942	$3,320 - 9,787
Percent Sales Change from Prior Year	1.56%	-4.97 - 20.13%
Sales Mix:		
Direct Sales	12.4%	Insufficient Data
Warehouse Sales - Counter	24.7%	Insufficient Data
Warehouse Sales - Delivery	63.0%	Insufficient Data
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	40.0%	14.5 - 71.0%
Heating & Cooling Supplies & Equipment	25.7%	2.5 - 36.5%
Industrial P-V-F (Pipes-Valves-Fittings)	28.0%	5.0 - 48.5%
Other Industrial Supplies & Equipment	1.2%	0.0 - 3.0%
Other Products	5.1%	0.0 - 4.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	29.9%	Insufficient Data
Gross Margin on Direct Shipments	8.2%	Insufficient Data
Gross Margin on Warehouse Sales	28.3%	24.6 - 30.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.73X	2.21 - 2.84X
Total Debt to Net Worth	63.6%	46.3 - 129.6%
Current Debt to Net Worth	55.2%	35.0 - 115.6%
Current Assets to Current Debt	2.14X	1.54 - 3.06X
Current Assets Minus Inventory/Curr Debt	0.90X	0.60 - 1.71X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.7	4.8 - 7.0
Average Invoice Size	$211	$144 - 276
Average Billing Line	$29.06	$25.13 - 51.67

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: METRO CHICAGO & NORTHERN IL

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$170,322	$141,525 - 211,533
Gross Margin Per Employee	$49,724	$42,182 - 56,261
Average Compensation Per Employee	$26,430	$22,172 - 28,791
Average Fringe Benefits Per Employee	$5,078	$3,556 - 6,899
Compensation & Fringes Per Employee	$30,162	$25,753 - 36,639
Payroll to Net Sales	14.1%	12.1 - 20.4%
Fringe Benefits to Net Sales	3.5%	2.3 - 4.4%
Payroll & Fringes to Net Sales	16.4%	13.6 - 25.1%
Payroll to Gross Margin	53.0%	49.1 - 61.0%
Fringe Benefits to Gross Margin	12.2%	8.5 - 14.6%
Payroll & Fringes to Gross Margin	63.7%	58.2 - 74.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.07X	1.85 - 3.96X
No. of Days Average Inventory Carried	119 Days	92 - 197 Days
Total Cost of Goods Sold to Ave Inventory	3.32X	2.76 - 4.05X
Whse Gross Margin Return on Ave Inventory	121%	83 - 158%
Turn & Earn Profitability Index	87%	57 - 113%
Percent of Firms on LIFO	55.56%	
ACCOUNTS RECEIVABLE		
Average Collection Period	60 Days	47 - 73 Days
Gross Margin Return on Receivables	213%	Insufficient Data
Aging of Receivable Dollars:		
Current	53.6%	37.6 - 64.1%
1-30 Days Past Due	20.0%	14.0 - 26.0%
31-60 Days Past Due	11.3%	6.1 - 14.7%
61-90 Days Past Due	4.9%	1.4 - 5.5%
Over 90 Days Past Due	10.2%	0.0 - 6.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,211	Insufficient Data
1-30 Days Past Due	$1,029	Insufficient Data
31-60 Days Past Due	$858	Insufficient Data
61-90 Days Past Due	$1,225	Insufficient Data
Over 90 Days Past Due		Insufficient Data
Total	$1,520	Insufficient Data
Aging of Receivable Accounts:		
Current	58.6%	Insufficient Data
1-30 Days Past Due	16.4%	Insufficient Data
31-60 Days Past Due	10.3%	Insufficient Data
61-90 Days Past Due	5.9%	Insufficient Data
Over 90 Days Past Due	8.8%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: METRO CHICAGO & NORTHERN IL

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	Insufficient Data
Cost of Goods Sold	72.5%	Insufficient Data
Gross Margin	29.9%	Insufficient Data
Operating Expenses:		
Selling Expenses	8.0%	Insufficient Data
Delivery Expenses	3.2%	Insufficient Data
Warehouse Expenses	3.7%	Insufficient Data
General & Administrative Expenses	13.0%	Insufficient Data
Occupancy Expenses	2.5%	Insufficient Data
Other Operating Expenses	0.0%	Insufficient Data
Total Operating Expenses	30.4%	Insufficient Data
Net Operating Profit	1.5%	Insufficient Data
Non-Operating Income	0.8%	Insufficient Data
Non-Operating Expenses	1.5%	Insufficient Data
Net Profit Before Tax	1.4%	Insufficient Data
Net Profit After Tax	1.0%	-4.9 - 1.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	30.4%	Insufficient Data
Total Operating Expense to Gross Margin	94.7%	Insufficient Data
Non-People Expense to Net Sales	9.4%	Insufficient Data
Non-People Expense to Gross Margin	33.5%	Insufficient Data
INTEREST EXPENSE		
Interest Expense to Net Sales	1.3%	0.5 - 1.5%
Times Interest Earned	2.4X	-2.3 - 3.9X
BALANCE SHEET		
Cash	6.0%	2.2 - 9.2%
Accounts & Notes Receivable, Trade(Net)	30.7%	23.1 - 35.3%
Inventory	50.1%	45.5 - 58.4%
Other Current Assets	1.4%	0.2 - 3.5%
Total Current Assets	88.1%	80.1 - 96.3%
All Other Assets	11.9%	3.7 - 19.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	47.2%	26.0 - 67.3%
Total Long-Term Liabilities	7.4%	1.1 - 15.6%
Total Liabilities	54.7%	30.8 - 87.2%
Total Net Worth	45.3%	12.8 - 69.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MID AMERICA (IA, KS, MN, MO, NE, ND, SD, UPPER MI, WI

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	4.73%	1.94 - 10.82%
Total Assets to Net Worth	1.82X	1.42 - 2.95X
Net Profit After Tax to Total Assets	2.73%	0.73 - 4.91%
Net Sales to Total Assets	2.32X	1.92 - 2.69X
Net Profit After Tax to Net Sales	1.00%	0.30 - 1.70%
Net Profit Before Tax to Total Assets	4.06%	0.67 - 7.59%
EBIT to Total Assets	6.08%	3.82 - 10.04%
SALES ANALYSIS		
Net Sales($000)	$4,948	$3,141 - 12,092
Percent Sales Change from Prior Year	9.75%	2.65 - 20.32%
Sales Mix:		
Direct Sales	12.5%	5.1 - 14.6%
Warehouse Sales - Counter	24.6%	5.7 - 37.3%
Warehouse Sales - Delivery	62.9%	51.7 - 81.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	52.1%	38.1 - 67.8%
Heating & Cooling Supplies & Equipment	19.3%	5.0 - 28.5%
Industrial P-V-F (Pipes-Valves-Fittings)	15.3%	0.0 - 23.7%
Other Industrial Supplies & Equipment	4.5%	0.0 - 5.0%
Other Products	8.9%	0.0 - 10.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.3%	21.8 - 26.7%
Gross Margin on Direct Shipments	12.4%	9.8 - 18.5%
Gross Margin on Warehouse Sales	25.8%	23.5 - 27.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.62X	2.16 - 3.06X
Total Debt to Net Worth	82.7%	42.6 - 195.9%
Current Debt to Net Worth	59.7%	33.5 - 118.4%
Current Assets to Current Debt	2.66X	2.00 - 3.65X
Current Assets Minus Inventory/Curr Debt	1.01X	0.74 - 1.82X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.3	4.5 - 7.6
Average Invoice Size	$169	$121 - 228
Average Billing Line	$31.82	$19.88 - 45.58

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MID AMERICA (IA, KS, MN, MO, NE, ND, SD, UPPER MI, WI

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$169,886	$152,697 - 197,920
Gross Margin Per Employee	$41,591	$35,987 - 48,563
Average Compensation Per Employee	$20,788	$18,167 - 23,151
Average Fringe Benefits Per Employee	$3,819	$2,785 - 4,639
Compensation & Fringes Per Employee	$24,332	$20,993 - 26,943
Payroll to Net Sales	12.2%	10.6 - 13.4%
Fringe Benefits to Net Sales	2.1%	1.6 - 2.6%
Payroll & Fringes to Net Sales	14.2%	11.7 - 15.7%
Payroll to Gross Margin	50.1%	47.0 - 53.2%
Fringe Benefits to Gross Margin	8.9%	7.3 - 10.8%
Payroll & Fringes to Gross Margin	58.7%	53.2 - 63.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.84X	2.28 - 3.80X
No. of Days Average Inventory Carried	129 Days	96 - 160 Days
Total Cost of Goods Sold to Ave Inventory	3.45X	2.71 - 4.61X
Whse Gross Margin Return on Ave Inventory	102%	84 - 131%
Turn & Earn Profitability Index	75%	63 - 98%
Percent of Firms on LIFO	69.64%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	40 - 57 Days
Gross Margin Return on Receivables	173%	149 - 210%
Aging of Receivable Dollars:		
Current	66.4%	60.9 - 72.0%
1-30 Days Past Due	15.3%	11.2 - 19.5%
31-60 Days Past Due	7.5%	4.9 - 8.9%
61-90 Days Past Due	4.7%	2.1 - 6.1%
Over 90 Days Past Due	6.1%	1.1 - 7.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,019	$663 - 1,575
1-30 Days Past Due	$1,112	$752 - 1,836
31-60 Days Past Due	$988	$640 - 2,121
61-90 Days Past Due	$1,163	$590 - 1,851
Over 90 Days Past Due	$1,349	$708 - 2,220
Total	$1,150	$725 - 1,567
Aging of Receivable Accounts:		
Current	68.4%	58.5 - 80.6%
1-30 Days Past Due	14.1%	8.0 - 20.5%
31-60 Days Past Due	8.1%	4.7 - 10.0%
61-90 Days Past Due	4.9%	1.9 - 7.1%
Over 90 Days Past Due	4.4%	1.4 - 6.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: MID AMERICA (IA, KS, MN, MO, NE, ND, SD, UPPER MI, WI

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.2%	73.3 - 78.2%
Gross Margin	24.3%	21.8 - 26.7%
Operating Expenses:		
Selling Expenses	6.0%	4.9 - 7.6%
Delivery Expenses	1.6%	1.1 - 2.1%
Warehouse Expenses	2.7%	1.9 - 3.7%
General & Administrative Expenses	8.3%	7.3 - 10.1%
Occupancy Expenses	1.8%	1.4 - 2.6%
Other Operating Expenses	0.0%	0.0 - 0.2%
Total Operating Expenses	22.4%	19.5 - 24.5%
Net Operating Profit	1.7%	0.7 - 3.5%
Non-Operating Income	2.1%	1.5 - 2.7%
Non-Operating Expenses	2.1%	1.4 - 3.0%
Net Profit Before Tax	1.7%	0.3 - 3.0%
Net Profit After Tax	1.0%	0.3 - 1.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	19.5 - 24.5%
Total Operating Expense to Gross Margin	92.8%	86.4 - 97.1%
Non-People Expense to Net Sales	7.5%	5.9 - 9.0%
Non-People Expense to Gross Margin	31.6%	26.1 - 35.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.9%
Times Interest Earned	2.0X	1.1 - 5.0X
BALANCE SHEET		
Cash	4.8%	0.6 - 7.5%
Accounts & Notes Receivable, Trade(Net)	29.7%	23.4 - 34.9%
Inventory	50.6%	42.8 - 57.3%
Other Current Assets	1.3%	0.2 - 1.2%
Total Current Assets	86.4%	81.6 - 92.3%
All Other Assets	13.6%	7.7 - 18.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.0%	23.5 - 47.9%
Total Long-Term Liabilities	13.2%	4.2 - 18.9%
Total Liabilities	51.2%	35.2 - 68.4%
Total Net Worth	48.8%	31.6 - 64.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: LOUISIANA, TEXAS, NEW MEXICO, OKLAHOMA & ARKANSAS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.61%	-7.43 - 20.09%
Total Assets to Net Worth	2.08X	1.49 - 2.93X
Net Profit After Tax to Total Assets	4.91%	-4.19 - 9.11%
Net Sales to Total Assets	2.66X	2.18 - 3.04X
Net Profit After Tax to Net Sales	2.30%	-1.80 - 3.30%
Net Profit Before Tax to Total Assets	7.33%	1.44 - 12.91%
EBIT to Total Assets	9.65%	0.13 - 15.68%
SALES ANALYSIS		
Net Sales ($000)	$5,881	$3,196 - 14,323
Percent Sales Change from Prior Year	4.88%	-8.28 - 31.93%
Sales Mix:		
Direct Sales	9.2%	2.6 - 15.4%
Warehouse Sales - Counter	33.6%	16.9 - 47.0%
Warehouse Sales - Delivery	57.2%	42.8 - 75.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	62.5%	33.2 - 95.0%
Heating & Cooling Supplies & Equipment	9.4%	0.0 - 20.5%
Industrial P-V-F (Pipes-Valves-Fittings)	14.5%	0.0 - 17.8%
Other Industrial Supplies & Equipment	1.6%	0.0 - 0.0%
Other Products	12.0%	0.0 - 21.8%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.9%	19.8 - 28.4%
Gross Margin on Direct Shipments	9.3%	5.4 - 18.4%
Gross Margin on Warehouse Sales	23.5%	21.1 - 26.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.10X	2.82 - 3.80X
Total Debt to Net Worth	102.6%	49.4 - 175.9%
Current Debt to Net Worth	84.0%	41.2 - 107.5%
Current Assets to Current Debt	2.24X	1.63 - 3.13X
Current Assets Minus Inventory/Curr Debt	1.01X	0.79 - 1.24X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.4	5.0 - 8.0
Average Invoice Size	$163	$112 - 207
Average Billing Line	$27.70	$17.71 - 35.10

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: LOUISIANA, TEXAS, NEW MEXICO, OKLAHOMA & ARKANSAS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$179,287	$129,635 - 246,643
Gross Margin Per Employee	$40,866	$33,880 - 52,003
Average Compensation Per Employee	$18,924	$16,704 - 20,960
Average Fringe Benefits Per Employee	$2,639	$2,072 - 3,579
Compensation & Fringes Per Employee	$21,637	$18,545 - 23,898
Payroll to Net Sales	9.9%	8.6 - 13.6%
Fringe Benefits to Net Sales	1.5%	1.1 - 2.6%
Payroll & Fringes to Net Sales	11.3%	9.8 - 14.6%
Payroll to Gross Margin	44.9%	39.9 - 51.3%
Fringe Benefits to Gross Margin	6.5%	4.8 - 9.5%
Payroll & Fringes to Gross Margin	51.8%	42.7 - 59.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.12X	3.28 - 5.05X
No. of Days Average Inventory Carried	89 Days	72 - 111 Days
Total Cost of Goods Sold to Ave Inventory	4.37X	3.49 - 5.96X
Whse Gross Margin Return on Ave Inventory	126%	103 - 171%
Turn & Earn Profitability Index	92%	80 - 129%
Percent of Firms on LIFO	56.56%	
ACCOUNTS RECEIVABLE		
Average Collection Period	45 Days	34 - 60 Days
Gross Margin Return on Receivables	169%	144 - 209%
Aging of Receivable Dollars:		
Current	70.1%	59.1 - 80.9%
1-30 Days Past Due	16.4%	10.1 - 21.0%
31-60 Days Past Due	5.4%	2.2 - 8.7%
61-90 Days Past Due	3.8%	0.7 - 6.1%
Over 90 Days Past Due	4.3%	0.0 - 4.8%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,255	$673 - 2,844
1-30 Days Past Due	$1,011	$633 - 2,560
31-60 Days Past Due	$1,068	$364 - 2,699
61-90 Days Past Due	$855	$376 - 2,652
Over 90 Days Past Due	$1,240	$755 - 4,986
Total	$1,162	$600 - 2,028
Aging of Receivable Accounts:		
Current	71.8%	70.1 - 86.3%
1-30 Days Past Due	15.6%	7.3 - 17.7%
31-60 Days Past Due	4.9%	2.9 - 6.0%
61-90 Days Past Due	3.8%	1.2 - 4.2%
Over 90 Days Past Due	3.9%	0.8 - 6.6%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: LOUISIANA, TEXAS, NEW MEXICO, OKLAHOMA & ARKANSAS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.5%	71.6 - 80.2%
Gross Margin	23.9%	19.8 - 28.4%
Operating Expenses:		
Selling Expenses	5.0%	3.7 - 5.6%
Delivery Expenses	1.6%	1.2 - 2.6%
Warehouse Expenses	1.9%	1.6 - 3.1%
General & Administrative Expenses	8.5%	7.6 - 12.6%
Occupancy Expenses	1.8%	1.3 - 2.6%
Other Operating Expenses	0.0%	0.0 - 0.4%
Total Operating Expenses	20.9%	16.6 - 23.9%
Net Operating Profit	3.0%	-1.1 - 5.9%
Non-Operating Income	2.1%	1.6 - 2.8%
Non-Operating Expenses	2.5%	1.3 - 3.5%
Net Profit Before Tax	3.2%	-1.8 - 4.6%
Net Profit After Tax	2.3%	-1.8 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.9%	16.6 - 23.9%
Total Operating Expense to Gross Margin	84.7%	74.5 - 105.2%
Non-People Expense to Net Sales	7.8%	5.0 - 10.7%
Non-People Expense to Gross Margin	34.2%	25.0 - 41.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.3 - 1.5%
Times Interest Earned	3.0X	0.2 - 6.7X
BALANCE SHEET		
Cash	5.9%	1.0 - 8.0%
Accounts & Notes Receivable, Trade(Net)	32.8%	24.7 - 37.7%
Inventory	44.5%	37.4 - 53.3%
Other Current Assets	2.8%	0.2 - 2.6%
Total Current Assets	86.0%	75.8 - 95.0%
All Other Assets	14.0%	4.9 - 24.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	44.9%	30.0 - 50.5%
Total Long-Term Liabilities	9.4%	0.0 - 14.2%
Total Liabilities	54.3%	35.1 - 70.3%
Total Net Worth	45.7%	29.7 - 64.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: ROCKY MOUNTAIN (CO, ID, MT, UT, WY)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	7.62%	2.35 - 16.94%
Total Assets to Net Worth	1.91X	1.49 - 3.48X
Net Profit After Tax to Total Assets	5.01%	1.20 - 7.47%
Net Sales to Total Assets	2.34X	1.94 - 2.93X
Net Profit After Tax to Net Sales	2.70%	0.50 - 3.00%
Net Profit Before Tax to Total Assets	5.79%	1.48 - 10.65%
EBIT to Total Assets	6.07%	5.27 - 9.42%
SALES ANALYSIS		
Net Sales($000)	$5,861	$2,269 - 11,120
Percent Sales Change from Prior Year	6.49%	-1.31 - 24.94%
Sales Mix:		
Direct Sales	12.8%	6.0 - 17.3%
Warehouse Sales - Counter	42.1%	10.4 - 84.6%
Warehouse Sales - Delivery	45.1%	1.3 - 78.3%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	57.0%	31.3 - 90.0%
Heating & Cooling Supplies & Equipment	3.5%	0.0 - 6.0%
Industrial P-V-F (Pipes-Valves-Fittings)	19.3%	1.5 - 35.8%
Other Industrial Supplies & Equipment	3.8%	0.0 - 4.8%
Other Products	16.4%	0.8 - 26.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	22.2%	18.6 - 24.7%
Gross Margin on Direct Shipments	9.9%	9.0 - 15.5%
Gross Margin on Warehouse Sales	25.3%	21.3 - 26.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.93X	2.54 - 3.48X
Total Debt to Net Worth	91.3%	49.1 - 248.3%
Current Debt to Net Worth	79.7%	30.6 - 212.8%
Current Assets to Current Debt	2.19X	1.46 - 3.24X
Current Assets Minus Inventory/Curr Debt	1.24X	0.66 - 1.98X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	5.5 - 7.5
Average Invoice Size	$174	$104 - 352
Average Billing Line	$24.80	$14.74 - 55.96

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: ROCKY MOUNTAIN (CO, ID, MT, UT, WY)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$208,009	$174,587 - 238,635
Gross Margin Per Employee	$46,685	$45,043 - 58,127
Average Compensation Per Employee	$24,991	$20,903 - 28,320
Average Fringe Benefits Per Employee	$3,752	$3,561 - 5,341
Compensation & Fringes Per Employee	$28,689	$23,961 - 34,638
Payroll to Net Sales	11.0%	9.6 - 12.3%
Fringe Benefits to Net Sales	1.7%	1.4 - 3.1%
Payroll & Fringes to Net Sales	13.6%	10.7 - 14.0%
Payroll to Gross Margin	47.1%	44.6 - 55.9%
Fringe Benefits to Gross Margin	8.1%	5.8 - 11.6%
Payroll & Fringes to Gross Margin	56.0%	51.2 - 63.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.64X	3.71 - 5.83X
No. of Days Average Inventory Carried	80 Days	63 - 99 Days
Total Cost of Goods Sold to Ave Inventory	4.68X	4.01 - 8.24X
Whse Gross Margin Return on Ave Inventory	143%	134 - 243%
Turn & Earn Profitability Index	110%	99 - 166%
Percent of Firms on LIFO	10.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	56 Days	42 - 77 Days
Gross Margin Return on Receivables	143%	111 - 183%
Aging of Receivable Dollars:		
Current	61.4%	37.9 - 78.3%
1-30 Days Past Due	17.5%	12.3 - 25.9%
31-60 Days Past Due	7.5%	2.9 - 13.4%
61-90 Days Past Due	8.1%	1.6 - 10.7%
Over 90 Days Past Due	5.5%	0.6 - 7.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$1,290	Insufficient Data
1-30 Days Past Due	$1,018	Insufficient Data
31-60 Days Past Due	$1,108	Insufficient Data
61-90 Days Past Due	$537	Insufficient Data
Over 90 Days Past Due	$1,548	Insufficient Data
Total	$1,212	Insufficient Data
Aging of Receivable Accounts:		
Current	68.1%	Insufficient Data
1-30 Days Past Due	16.3%	Insufficient Data
31-60 Days Past Due	7.3%	Insufficient Data
61-90 Days Past Due	4.8%	Insufficient Data
Over 90 Days Past Due	3.5%	Insufficient Data
Total	100.0%	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: ROCKY MOUNTAIN (CO, ID, MT, UT, WY)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.6%	75.3 - 81.3%
Gross Margin	22.2%	18.6 - 24.7%
Operating Expenses:		
Selling Expenses	5.4%	4.4 - 8.2%
Delivery Expenses	1.2%	0.8 - 2.0%
Warehouse Expenses	1.6%	0.4 - 3.4%
General & Administrative Expenses	9.1%	3.6 - 10.9%
Occupancy Expenses	1.3%	1.0 - 3.3%
Other Operating Expenses	0.0%	0.0 - 0.3%
Total Operating Expenses	19.9%	15.3 - 23.2%
Net Operating Profit	2.4%	1.5 - 4.7%
Non-Operating Income	2.0%	1.4 - 3.1%
Non-Operating Expenses	1.9%	0.5 - 3.3%
Net Profit Before Tax	3.4%	1.0 - 5.0%
Net Profit After Tax	2.7%	0.5 - 3.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	19.9%	15.3 - 23.2%
Total Operating Expense to Gross Margin	90.8%	72.1 - 94.0%
Non-People Expense to Net Sales	6.9%	Insufficient Data
Non-People Expense to Gross Margin	29.8%	Insufficient Data
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.3 - 1.6%
Times Interest Earned	5.0X	1.4 - 7.0X
BALANCE SHEET		
Cash	12.3%	1.6 - 28.6%
Accounts & Notes Receivable, Trade(Net)	35.0%	24.3 - 49.3%
Inventory	37.4%	26.4 - 49.2%
Other Current Assets	0.4%	0.0 - 0.7%
Total Current Assets	85.1%	71.4 - 95.5%
All Other Assets	14.9%	4.5 - 28.6%
Total Assets .	100.0%	100.0 - 100.0%
Total Current Liabilities	37.5%	20.2 - 58.3%
Total Long-Term Liabilities	10.7%	1.2 - 12.5%
Total Liabilities	48.2%	31.0 - 69.4%
Total Net Worth	51.8%	30.6 - 69.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: PACIFIC NORTHWEST (AK, OR, WA)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.07%	Insufficient Data
Total Assets to Net Worth	2.23X	Insufficient Data
Net Profit After Tax to Total Assets	4.53%	Insufficient Data
Net Sales to Total Assets	2.74X	Insufficient Data
Net Profit After Tax to Net Sales	1.10%	Insufficient Data
Net Profit Before Tax to Total Assets	6.26%	Insufficient Data
EBIT to Total Assets	7.18%	Insufficient Data
SALES ANALYSIS		
Net Sales ($000)	$8,967	Insufficient Data
Percent Sales Change from Prior Year	2.37%	Insufficient Data
Sales Mix:		
Direct Sales		Insufficient Data
Warehouse Sales - Counter		Insufficient Data
Warehouse Sales - Delivery		Insufficient Data
TOTAL SALES	100.0%	Insufficient Data
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	55.7%	Insufficient Data
Heating & Cooling Supplies & Equipment	10.0%	Insufficient Data
Industrial P-V-F (Pipes-Valves-Fittings)	26.4%	Insufficient Data
Other Industrial Supplies & Equipment	0.0%	Insufficient Data
Other Products	7.9%	Insufficient Data
TOTAL SALES	100.0%	Insufficient Data
GROSS MARGIN		
Gross Margin on Net Sales		Insufficient Data
Gross Margin on Direct Shipments		Insufficient Data
Gross Margin on Warehouse Sales		Insufficient Data
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.17X	Insufficient Data
Total Debt to Net Worth	122.6%	Insufficient Data
Current Debt to Net Worth	103.7%	Insufficient Data
Current Assets to Current Debt	1.65X	Insufficient Data
Current Assets Minus Inventory/Curr Debt	0.62X	Insufficient Data
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.5	Insufficient Data
Average Invoice Size	$222	Insufficient Data
Average Billing Line	$44.74	Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: PACIFIC NORTHWEST (AK, OR, WA)

	TYPICAL	*MIDDLE RANGE*
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$216,941	Insufficient Data
Gross Margin Per Employee	$45,566	Insufficient Data
Average Compensation Per Employee	$24,465	Insufficient Data
Average Fringe Benefits Per Employee	$4,433	Insufficient Data
Compensation & Fringes Per Employee	$28,898	Insufficient Data
Payroll to Net Sales	11.6%	Insufficient Data
Fringe Benefits to Net Sales	2.0%	Insufficient Data
Payroll & Fringes to Net Sales	13.8%	Insufficient Data
Payroll to Gross Margin	55.1%	Insufficient Data
Fringe Benefits to Gross Margin	8.5%	Insufficient Data
Payroll & Fringes to Gross Margin	65.8%	Insufficient Data
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory		Insufficient Data
No. of Days Average Inventory Carried		Insufficient Data
Total Cost of Goods Sold to Ave Inventory	4.03X	Insufficient Data
Whse Gross Margin Return on Ave Inventory		Insufficient Data
Turn & Earn Profitability Index		Insufficient Data
Percent of Firms on LIFO	75.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	Insufficient Data
Gross Margin Return on Receivables		Insufficient Data
Aging of Receivable Dollars:		
Current	62.3%	Insufficient Data
1-30 Days Past Due	22.3%	Insufficient Data
31-60 Days Past Due	7.5%	Insufficient Data
61-90 Days Past Due	5.6%	Insufficient Data
Over 90 Days Past Due	2.3%	Insufficient Data
Total	100.0%	Insufficient Data
Average Account Balance:		
Current		Insufficient Data
1-30 Days Past Due		Insufficient Data
31-60 Days Past Due		Insufficient Data
61-90 Days Past Due		Insufficient Data
Over 90 Days Past Due		Insufficient Data
Total		Insufficient Data
Aging of Receivable Accounts:		
Current		Insufficient Data
1-30 Days Past Due		Insufficient Data
31-60 Days Past Due		Insufficient Data
61-90 Days Past Due		Insufficient Data
Over 90 Days Past Due		Insufficient Data
Total		Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: PACIFIC NORTHWEST (AK, OR, WA)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales		Insufficient Data
Cost of Goods Sold		Insufficient Data
Gross Margin		Insufficient Data
Operating Expenses:		
Selling Expenses		Insufficient Data
Delivery Expenses		Insufficient Data
Warehouse Expenses		Insufficient Data
General & Administrative Expenses		Insufficient Data
Occupancy Expenses		Insufficient Data
Other Operating Expenses		Insufficient Data
Total Operating Expenses		Insufficient Data
Net Operating Profit		Insufficient Data
Non-Operating Income		Insufficient Data
Non-Operating Expenses		Insufficient Data
Net Profit Before Tax		Insufficient Data
Net Profit After Tax	1.1%	Insufficient Data
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales		Insufficient Data
Total Operating Expense to Gross Margin		Insufficient Data
Non-People Expense to Net Sales		Insufficient Data
Non-People Expense to Gross Margin		Insufficient Data
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	Insufficient Data
Times Interest Earned	7.8X	Insufficient Data
BALANCE SHEET		
Cash		Insufficient Data
Accounts & Notes Receivable, Trade(Net)		Insufficient Data
Inventory		Insufficient Data
Other Current Assets		Insufficient Data
Total Current Assets		Insufficient Data
All Other Assets		Insufficient Data
Total Assets		Insufficient Data
Total Current Liabilities		Insufficient Data
Total Long-Term Liabilities		Insufficient Data
Total Liabilities		Insufficient Data
Total Net Worth		Insufficient Data
Total Liabilities & Net Worth		Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NORTHERN CALIFORNIA, NORTHERN NEVADA & HAWAII

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.91%	4.98 - 9.93%
Total Assets to Net Worth	1.64X	1.26 - 2.14X
Net Profit After Tax to Total Assets	4.12%	2.53 - 6.08%
Net Sales to Total Assets	2.06X	1.52 - 2.47X
Net Profit After Tax to Net Sales	1.90%	1.30 - 2.90%
Net Profit Before Tax to Total Assets	5.56%	3.12 - 8.84%
EBIT to Total Assets	7.20%	4.89 - 11.25%
SALES ANALYSIS		
Net Sales($000)	$3,855	$2,649 - 5,600
Percent Sales Change from Prior Year	17.19%	0.92 - 29.21%
Sales Mix:		
Direct Sales	7.1%	0.6 - 11.8%
Warehouse Sales - Counter	52.2%	34.4 - 82.4%
Warehouse Sales - Delivery	40.7%	5.0 - 58.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	54.6%	21.7 - 79.5%
Heating & Cooling Supplies & Equipment	10.9%	0.0 - 14.3%
Industrial P-V-F (Pipes-Valves-Fittings)	17.5%	0.0 - 29.0%
Other Industrial Supplies & Equipment	1.8%	0.0 - 4.5%
Other Products	15.2%	0.0 - 26.9%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.5%	Insufficient Data
Gross Margin on Direct Shipments	9.5%	Insufficient Data
Gross Margin on Warehouse Sales	27.0%	24.1 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.30X	1.93 - 2.67X
Total Debt to Net Worth	63.6%	26.3 - 114.1%
Current Debt to Net Worth	40.1%	24.7 - 83.9%
Current Assets to Current Debt	3.11X	2.04 - 4.70X
Current Assets Minus Inventory/Curr Debt	1.29X	0.97 - 2.19X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.1	4.8 - 7.0
Average Invoice Size	$142	$102 - 248
Average Billing Line	$26.61	$20.21 - 29.78

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NORTHERN CALIFORNIA, NORTHERN NEVADA & HAWAII

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$193,700	$137,903 - 207,785
Gross Margin Per Employee	$52,200	$40,498 - 56,550
Average Compensation Per Employee	$21,858	$18,520 - 24,223
Average Fringe Benefits Per Employee	$4,584	$3,716 - 6,602
Compensation & Fringes Per Employee	$25,698	$23,500 - 30,402
Payroll to Net Sales	12.3%	10.3 - 13.4%
Fringe Benefits to Net Sales	2.5%	1.8 - 3.4%
Payroll & Fringes to Net Sales	15.8%	12.5 - 16.8%
Payroll to Gross Margin	44.2%	41.7 - 51.4%
Fringe Benefits to Gross Margin	9.3%	7.5 - 13.4%
Payroll & Fringes to Gross Margin	56.7%	50.2 - 62.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.90X	2.15 - 4.66X
No. of Days Average Inventory Carried	126 Days	78 - 171 Days
Total Cost of Goods Sold to Ave Inventory	3.21X	2.60 - 4.72X
Whse Gross Margin Return on Ave Inventory	107%	91 - 139%
Turn & Earn Profitability Index	77%	70 - 115%
Percent of Firms on LIFO	58.33%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	44 - 58 Days
Gross Margin Return on Receivables	210%	Insufficient Data
Aging of Receivable Dollars:		
Current	63.0%	56.4 - 70.8%
1-30 Days Past Due	20.8%	14.8 - 29.6%
31-60 Days Past Due	5.1%	3.2 - 6.9%
61-90 Days Past Due	8.6%	1.9 - 15.0%
Over 90 Days Past Due	2.4%	0.0 - 5.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current	$962	$823 - 2,063
1-30 Days Past Due	$927	$675 - 2,396
31-60 Days Past Due	$813	$599 - 1,090
61-90 Days Past Due	$1,905	$606 - 3,027
Over 90 Days Past Due	$1,112	Insufficient Data
Total	$1,027	$928 - 1,433
Aging of Receivable Accounts:		
Current	64.6%	53.9 - 73.7%
1-30 Days Past Due	20.3%	14.3 - 23.7%
31-60 Days Past Due	7.6%	5.5 - 9.3%
61-90 Days Past Due	5.1%	2.6 - 6.2%
Over 90 Days Past Due	2.4%	0.0 - 3.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: NORTHERN CALIFORNIA, NORTHERN NEVADA & HAWAII

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	Insufficient Data
Cost of Goods Sold	73.3%	Insufficient Data
Gross Margin	27.5%	Insufficient Data
Operating Expenses:		
Selling Expenses	4.7%	Insufficient Data
Delivery Expenses	1.6%	Insufficient Data
Warehouse Expenses	3.5%	Insufficient Data
General & Administrative Expenses	9.6%	Insufficient Data
Occupancy Expenses	1.7%	Insufficient Data
Other Operating Expenses	0.0%	Insufficient Data
Total Operating Expenses	23.8%	Insufficient Data
Net Operating Profit	2.2%	Insufficient Data
Non-Operating Income	2.5%	Insufficient Data
Non-Operating Expenses	1.5%	Insufficient Data
Net Profit Before Tax	2.8%	Insufficient Data
Net Profit After Tax	1.9%	1.3 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.8%	Insufficient Data
Total Operating Expense to Gross Margin	91.3%	Insufficient Data
Non-People Expense to Net Sales	8.6%	Insufficient Data
Non-People Expense to Gross Margin	32.1%	Insufficient Data
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.1 - 1.5%
Times Interest Earned	3.2X	2.2 - 29.4X
BALANCE SHEET		
Cash	5.5%	1.8 - 10.8%
Accounts & Notes Receivable, Trade(Net)	28.6%	27.9 - 31.6%
Inventory	49.9%	46.0 - 59.5%
Other Current Assets	3.7%	0.2 - 3.0%
Total Current Assets	87.8%	79.9 - 94.6%
All Other Assets	12.2%	5.4 - 20.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.4%	21.7 - 44.9%
Total Long-Term Liabilities	6.8%	1.4 - 11.3%
Total Liabilities	41.2%	27.8 - 54.4%
Total Net Worth	58.8%	45.6 - 72.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: PACIFIC SOUTHWEST (AZ, SOUTHERN CA, SOUTHERN NV)

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	15.51%	0.18 - 25.90%
Total Assets to Net Worth	2.63X	1.30 - 3.37X
Net Profit After Tax to Total Assets	4.60%	0.17 - 8.37%
Net Sales to Total Assets	2.89X	2.25 - 3.64X
Net Profit After Tax to Net Sales	1.60%	0.10 - 3.40%
Net Profit Before Tax to Total Assets	5.57%	0.24 - 10.62%
EBIT to Total Assets	10.52%	Insufficient Data
SALES ANALYSIS		
Net Sales($000)	$3,402	$1,538 - 7,827
Percent Sales Change from Prior Year	11.56%	Insufficient Data
Sales Mix:		
Direct Sales	4.7%	Insufficient Data
Warehouse Sales - Counter	15.6%	Insufficient Data
Warehouse Sales - Delivery	54.7%	Insufficient Data
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	64.0%	Insufficient Data
Heating & Cooling Supplies & Equipment	2.0%	Insufficient Data
Industrial P-V-F (Pipes-Valves-Fittings)	30.3%	Insufficient Data
Other Industrial Supplies & Equipment	2.0%	Insufficient Data
Other Products	1.7%	Insufficient Data
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales		Insufficient Data
Gross Margin on Direct Shipments		Insufficient Data
Gross Margin on Warehouse Sales		Insufficient Data
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.07X	2.37 - 3.92X
Total Debt to Net Worth	162.7%	30.3 - 237.3%
Current Debt to Net Worth	159.6%	30.3 - 227.2%
Current Assets to Current Debt	1.56X	1.40 - 3.96X
Current Assets Minus Inventory/Curr Debt	0.81X	0.68 - 1.72X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.5	Insufficient Data
Average Invoice Size		Insufficient Data
Average Billing Line		Insufficient Data

REGION: PACIFIC SOUTHWEST (AZ, SOUTHERN CA, SOUTHERN NV)

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$205,687	Insufficient Data
Gross Margin Per Employee	$46,789	Insufficient Data
Average Compensation Per Employee	$24,532	Insufficient Data
Average Fringe Benefits Per Employee	$3,366	Insufficient Data
Compensation & Fringes Per Employee	$29,042	Insufficient Data
Payroll to Net Sales	10.1%	Insufficient Data
Fringe Benefits to Net Sales	1.1%	Insufficient Data
Payroll & Fringes to Net Sales	8.3%	0.0 - 12.4%
Payroll to Gross Margin	43.4%	Insufficient Data
Fringe Benefits to Gross Margin	5.5%	Insufficient Data
Payroll & Fringes to Gross Margin	50.5%	0.0 - 53.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory		Insufficient Data
No. of Days Average Inventory Carried		Insufficient Data
Total Cost of Goods Sold to Ave Inventory	4.74X	Insufficient Data
Whse Gross Margin Return on Ave Inventory	172%	Insufficient Data
Turn & Earn Profitability Index		Insufficient Data
Percent of Firms on LIFO	60.00%	
ACCOUNTS RECEIVABLE		
Average Collection Period		Insufficient Data
Gross Margin Return on Receivables		Insufficient Data
Aging of Receivable Dollars:		
Current	68.9%	Insufficient Data
1-30 Days Past Due	17.6%	Insufficient Data
31-60 Days Past Due	5.2%	Insufficient Data
61-90 Days Past Due	4.9%	Insufficient Data
Over 90 Days Past Due	3.5%	Insufficient Data
Total	100.0%	Insufficient Data
Average Account Balance:		
Current		Insufficient Data
1-30 Days Past Due		Insufficient Data
31-60 Days Past Due		Insufficient Data
61-90 Days Past Due		Insufficient Data
Over 90 Days Past Due		Insufficient Data
Total		Insufficient Data
Aging of Receivable Accounts:		
Current		Insufficient Data
1-30 Days Past Due		Insufficient Data
31-60 Days Past Due		Insufficient Data
61-90 Days Past Due		Insufficient Data
Over 90 Days Past Due		Insufficient Data
Total		Insufficient Data

AMERICAN SUPPLY ASSOCIATION 1984 ANNUAL OPERATING PERFORMANCE SURVEY

REGION: PACIFIC SOUTHWEST (AZ, SOUTHERN CA, SOUTHERN NV)

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales		Insufficient Data
Cost of Goods Sold		Insufficient Data
Gross Margin		Insufficient Data
Operating Expenses:		
Selling Expenses		Insufficient Data
Delivery Expenses		Insufficient Data
Warehouse Expenses		Insufficient Data
General & Administrative Expenses		Insufficient Data
Occupancy Expenses		Insufficient Data
Other Operating Expenses		Insufficient Data
Total Operating Expenses		Insufficient Data
Net Operating Profit		Insufficient Data
Non-Operating Income		Insufficient Data
Non-Operating Expenses		Insufficient Data
Net Profit Before Tax		Insufficient Data
Net Profit After Tax	1.6%	0.1 - 3.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales		Insufficient Data
Total Operating Expense to Gross Margin		Insufficient Data
Non-People Expense to Net Sales		Insufficient Data
Non-People Expense to Gross Margin		Insufficient Data
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	Insufficient Data
Times Interest Earned	2.4X	Insufficient Data
BALANCE SHEET		
Cash		Insufficient Data
Accounts & Notes Receivable, Trade(Net)		Insufficient Data
Inventory		Insufficient Data
Other Current Assets		Insufficient Data
Total Current Assets		Insufficient Data
All Other Assets		Insufficient Data
Total Assets		Insufficient Data
Total Current Liabilities		Insufficient Data
Total Long-Term Liabilities		Insufficient Data
Total Liabilities		Insufficient Data
Total Net Worth		Insufficient Data
Total Liabilities & Net Worth		Insufficient Data

APPENDIX

Survey Methodology/Demographics

In late March, 1984, the American Supply Association mailed strictly confidential questionnaires to all P-H-C-P wholesaler members. The primary intent of this survey was to collect detailed financial and operating information from member firms by specific geographic region, sales volume size and type of product emphasis.

Once the questionnaires were received by Industry Insights, all company identification, if any, was removed and a confidential company identification code was assigned. The data was then coded, keyed to tape, and edited by Industry Insights financial analysts for validity. Computer processing was then performed on all data to insure statistical validity and to produce the financial and operating ratios contained in this study.

In all, 286 completed and usable questionnaires were received by Industry Insights representing approximately 1,000 different wholesaler locations (including headquarters). In particular, the statistical sample consists of the following:

	Number of Reporting Firms
ALL REPORTING FIRMS	286
BY PRODUCT EMPHASIS:	
Plumbing Supplies & Equipment Firms (those that that obtain more than 50% of sales from plumbing products)	143
Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from Industrial P-V-F)	38
Plumbing Supplies & Equipment and Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from plumbing and Industrial P-V-F products combined but less than 50% in each category alone)	37
HVAC & Other Emphasis Firms (those companies that cannot be classified in any of the three above groups; or, those firms with less than 50% of sales in combined plumbing supplies and equipment, and Industrial P-V-F products)	68
BY PRODUCT EMPHASIS AND SALES VOLUME SIZE:	
Plumbing Supplies & Equipment Firms:	
Sales Under $3,000,000	37
Sales $3,000,000 to $7,000,000	60
Sales $7,000,000 to $12,000,000	27
Sales Over $12,000,000	19

	Number of Reporting Firms
BY PRODUCT EMPHASIS AND SALES VOLUME SIZE (continued)	
Industrial Pipe, Valves and Fittings Firms:	
Sales Under $4,000,000	15
Sales $4,000,000 to $12,000,000	11
Sales Over $7,000,000	12
Plumbing Supplies & Equipment and Industrial Pipe, Valves and Fittings Firms:	
Sales Under $3,000,000	9
Sales $3,000,000 to $7,000,000	12
Sales Over $7,000,000	16
HVAC & Other Emphasis Firms:	
Sales Under $3,000,000	22
Sales $3,000,000 to $8,000,000	24
Sales Over $8,000,000	22
BY GEOGRAPHIC REGION:	
New England (CT, ME, MA, NH, RI, VT)	26
New York (excluding NYC)	15
Long Island and Metro NYC	2
Middle Atlantic (DE, Eastern PA, MD, NJ, DC)	28
East Central (IN, OH, Western PA, WV)	43
Southern (AL, FL, GA, KY, MS, NC SC, TN, VA)	27
Michigan (excluding Upper MI)	14
Metro Chicago and Northern IL	9
Mid-America (IA, Southern IL, KS, MN, MO, NE, ND, SD, Upper MI, WI)	57
Louisiana, Texas, New Mexico, Oklahoma and Arkansas	28
Rocky Mountain (CO, ID, MT, UT, WY)	10
Pacific Northwest (AK, OR, WA)	5
Northern California, Northern Nevada, and Hawaii	12
Pacific Southwest (AZ, Southern CA, Southern NV)	8
Region Not Designated	2

The statistical information contained in this report is believed to be representative of the companies responding to the survey. All reasonable efforts were taken to assure data comparability within the limitations of accounting reporting procedures. However, the statistical validity of any given number varies depending upon sample sizes and the amount of consistency among responses for that particular ratio. For those individuals interested in more statistical detail than is contained in this report (such as sample sizes and/or standard deviation by specific ratio), contact:

Industry Insights, Inc.
2564 Billingsley Road
Columbus, Ohio 43085
614/889-8284

Ratio Definitions and Sample Calculations

A primary purpose of the ASA Operating Performance Report of the P-H-C-P Wholesaler Industry is to provide a basis for comparing your own firm's performance with industry comparatives. In order to do this, it is necessary to calculate your firm's individual company ratios using the same methods that were used to compute the ratios in this report. These definitions appear on the pages which follow.

To further clarify the computational process, this section of the report also contains a completed survey form and sample calculations for a purely hypothetical company.

Note: Those firms that participated in the ASA survey received, absolutely free, a confidential Individual Company Report. This report presents a company's own ratios and data already computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. As a result, participating companies received invaluable information about their own business performance without having to spend time and effort to make the calculations manually.

Ratio Definitions and Sample Calculations

Performance Measure	Method of Computation () Indicates Survey Line #	Computational Example: Sample Co.	Suggested Uses
Overall Performance			
• Net Profit After Tax to Net Worth (%)	(16) Net Profit After Tax ÷ (27) Net Worth	$69,815 ÷ 1,072,599 = 6.5%	Overall financial performance from the owner's standpoint.
• Total Assets to Net Worth (X)	(23) Total Assets ÷ (27) Net Worth	$2,369,891 ÷ 1,072,599 = 2.2x	Setting policies concerning amount of debt vs. equity in the business.
• Net Profit After Tax to Total Assets (%)	(16) Net Profit After Tax ÷ (23) Total Assets	$69,815 ÷ 2,369,891 = 2.9%	Overall financial performance from a management standpoint.
• Net Sales to Total Assets (X)	(1) Net Sales ÷ (23) Total Assets	$5,884,780 ÷ 2,369,891 = 2.5x	Asset management--productivity of total asset base.
• Net Profit After Tax to Net Sales (%)	(16) Net Profit After Tax ÷ (1) Net Sales	$69,815 ÷ 5,884,780 = 1.2%	Margin management (gross margin and expenses)
• Net Profit Before Tax to Total Assets (%)	(14) Net Profit Before Tax ÷ (23) Total Assets	$114,136 ÷ 2,369,891 = 4.8%	Overall financial performance from a management standpoint ignoring tax considerations.
• EBIT to Total Assets (%)	[(14) Net Profit Before Tax + (48) Interest] ÷ (23) Total Assets	[$114,136 +13,092] ÷ 2,369,891 = 5.4%	Same as previous ratio but ignores interest expense (leverage, not operations related)
Sales Analysis			
• Percent Sale Change from prior year	[(1) Net Sales - (41) Previous Years Sales] ÷ (41) Previous Years Sales	[$5,884,780 - 6,002,478] ÷ 6,002,478 = (2.0)	Indication of company growth. Caution should be used due to inflationary distortions.
Asset and Financial Management			
• Current Asset Turn (X)	(1) Net Sales ÷ (21) Total Current Assets	$5,884,780 ÷ 2,258,150 = 2.6x	Asset management - productivity of current asset base.
• Total Debt to Net Worth (%)	(26) Total Liabilities ÷ (27) Net Worth	$1,297,292 ÷ 1,072,599 = 120.9%	Measures overall leverage. Use to set policy of how much debt is employed relative to owner's funds.
• Current Debt to Net Worth (%)	(24) Current Liabilities ÷ (27) Net Worth	$520,042 ÷ 1,072,599 = 48.5%	A measure of the financial mix of the firm.
• Current Assets to Current Debt (x)	(21) Total Current Assets ÷ (24) Total Current Liabilities	$2,258,150 ÷ 520,042 = 4.3X	Good overall measures of liquidity. Used to stay within guides set by suppliers and creditors.
• Current Assets Less Inventory to Current Debt (X)	[(21) Total Current Assets - (19) Inventory] ÷ (24) Total Current Liabilities	[$2,258,150 - 983,840] ÷ 520,042 = 2.5x	Same as above ratio.
Transaction Data			
• Billing Lines Per Invoice	(47) Annual Billing Lines ÷ (46) Total No. Invoices	171,872 ÷ 21,484 = 8	Gives some indication of invoicing efficiency.
• Average Invoice Size ($)	(1)Net Credit ÷ (46) Total No. Invoices	$5,884,780 X .83 ÷ 21,484 = $227.35	Indicates the typical size of an invoice and thus add-on purchase efficiency.
• Average Billing Line ($)	(1)Net Credit ÷ (47) Annual Billing Lines	$5,884,780 X .83 ÷ 171,872 = $28.42	Indicates the size of a typical item billed.
Personnel Productivity			
• Payroll to Net Sales (%)	(29) Total Payroll Expenses ÷ (1) Net Sales	$604,313 ÷ 5,884,780 = 10.3%	Overall indicator of payroll cost control. Inflation proof. Compare: overtime; vs. industry; by store.
• Fringe Benefits to Net Sales (%)	(30) Total Fringe & Payroll Taxes ÷ (1) Net Sales	$234,303 ÷ 5,884,780 = 4.0%	Indicates how much of sales are paid in fringe benefits. Compare: overtime; vs. industry.
• Payroll and Fringes to Net Sales (%)	[(29) Payroll Expense + (30) Fringe Benefits] ÷ (1) Net Sales	[$604,313 + 234,303] ÷ 5,884,780 = 14.3%	Indicator of all personnel related costs.

Ratio Definitions and Sample Calculations

Performance Measure	Method of Computation () Indicates Survey Line #	Computational Example: Sample Co.	Suggested Uses
Personnel Productivity (cont)			
• Payroll to Gross Margin (%)	(29) Total Payroll Expense ÷ (3) Gross Profit on Sales	$604,313 ÷ 1,492,481 = 40.5%	Indicates the portion of gross profits that are used in payroll costs.
• Fringe Benefits to Gross Margin (%)	(30) Total Fringe Benefits ÷ (3) Gross Profit on Sales	$234,303 ÷ 1,492,481 = 15.7%	Same as above but relative to fringe benefits.
• Payroll and Fringes to Gross Margin (%)	[(29) Total Payroll + (30) Total Fringes] ÷ (3) Gross Profit on Sales	[$604,313 + 234,303] ÷ 1,492,481 = 56.2%	Indicator of all personnel related costs that are used in gross margin production.
Inventory Management			
• Cost of Whse Goods Sold to Average Inventory (x)	[(36) Total Whse Sales - (39) Whse Gross Profit] ÷ [((19) Inventory + (42) Previous Years Inventory) ÷ 2]	[$5,240,136 - 1,396,217] ÷ [(983,840 + 992,313) ÷ 2] = 3.9x	Measure of inventory productivity. Compare to industry, over time or product categories.
• No. of Days Average Inventory Carried	[((19) Inventory + (42) Previous Years Inventory) ÷ 2] ÷ [((35) Whse Sales-(39) Whse Gross Profit) ÷ 365]	[($983,840 + 992,313) ÷ 2] ÷ [(5,240,136-1,396,217) ÷ 365] = 94 days	Similar in value to above measure. Shows how quickly inventory is moving.
• Total Cost of Goods Sold to Average Inventory (x)	(2) Total Cost of Goods Sold ÷ [(19) Inventory + (42) Previous Years Inventory) ÷ 2]	$4,392,299 ÷ [(983,840 + 992,313) ÷ 2] = 4.4x	Shows how many times you were able to "turn over" your inventory.
• Whse Gross Margin Return on Average Inventory (%)	(39) Whse Gross Profit ÷ [((19) Inventory + (42) Previous Years Inventory) ÷ 2]	$1,396,217 ÷ [(983,840 + 992,313) ÷ 2] = 141.3%	Overall measure of inventory, profitability and productivity. Combines margin and turnover.
• Turn & Earn Profitability Index (%)	[((36) Whse Sales-(39) Whse Gross Profit) ÷ ((19) Inventory + (42) Previous Years Inventory) ÷ 2] X [((39) Whse Gross Profit ÷ (35) Whse Sales) X 100]	[($5,240,136 - 139,217) ÷ (983,840 + 992,313) ÷ 2] X [(1,396,217 ÷ 5,240,136) X 100] = 103.9	Another return-on-investment measure which combines margin and turnover.
Accounts Receivable			
• Average Collection Period	(18) Accounts & Notes Receivable (Net) ÷ [(1) Net Sales X (1.0 - (44) % Cash Sales) ÷ 365]	1,096,734 ÷ [5,884,780 X (1.0 - .17) ÷ 365] = 82 days	Measuring effectiveness of various collection policies. Compare to industry and over time.
• Gross Margin Return on Receivables (%)	[((3) Gross Profit ÷ (1) Net Sales) X 100] X [365 ÷ Average Collection Period]	[(1,492,481 ÷ 5,884,780) X 100] X [365 ÷ 82] = 112.9%	Indicator of how much gross margin dollars are being generated on your accounts receivables.
Operating Expense Control			
• Total Operating Expense to Net Sales (%)	(10) Total Operating Expense ÷ (1) Net Sales	$1,323,621 ÷ 5,884,780 = 22.5%	Conventional measure used for controlling total operating costs.
• Total Operating Expense to Gross Margin (%)	(10) Total Operating Expense ÷ (3) Gross Profit	$1,323,621 ÷ 1,492,481 = 88.7%	A somewhat more specific measure than the one above.
• Non-People Expense to Net Sales (%)	[(10) Total Operaging Expense - ((29) Payroll + (30) Fringes)] ÷ (1) Net Sales	[$1,323,621 - (604,313 + 234,303)] ÷ 5,884,780 = 8.2%	A measure for controlling all operating costs except personnel costs.
• Non-People Expense to Gross Margin (%)	[(10) Total Operating Expense - ((29) Payroll + (30) Fringes)] ÷ (3) Gross Profit	[$1,323,621 - (604,313 + 234,303)] ÷ 1,492,481 = 32.5	Same as above but somewhat finer.
Interest Expense			
• Interest Expense to Net Sales (%)	(48) Interest Expense ÷ (1) Net Sales	$13,092 ÷ 5,884,780 = 0.2%	An indicator of how much debt financing is costing the firm relative to sales.
• Times Interest Earned (X)	[(14) Net Profit Before Taxes + (48) Interest] ÷ (48) Interest	[$114,136 + 13,092] ÷ 13,092 = 9.7x	Indicates the ease in which your company can pay interest costs out of earnings.

american supply association

CONFIDENTIAL

CODE NUMBER ☐

AMERICAN SUPPLY ASSOCIATION

1984 ANNUAL OPERATING PERFORMANCE SURVEY

(Based on 1983 Financial Results)

With your help, the 1984 ASA Operating Performance Survey (of 1983 financial information) promises to be the best ever. Building upon the format and content improvements of the past couple years, this year's study will also provide more trend information as well as other features. Most importantly, however, a confidential Individual Company Report of your own firm's financial ratios displayed alongside the appropriate industry comparatives will be available to you at no charge just for participating in the study. And....for the first time ever, the Individual Company Report will include certain two year trend information.

To participate and receive this invaluable free information about your firm, please take the time to fill in the data requested on this Survey Form using the following guidelines:

(1) Enter figures from your completed fiscal year which ended nearest to December 31, 1983. Full year data is required. Financial data need not be audited.

(2) Dollar amounts should be rounded to the nearest dollar. Eliminate "cents." Columns labeled "Code #" are for internal use only and should be ignored.

(3) Please report on the basis of your total firm rather than for individual branches.

While it is not necessary to fill in every line, be as complete as possible to assure that your Individual Company Report will be much more useful. *Or, if you prefer, just fill in the information on pages 2 and 4 and forward your "Income Statement and Balance Sheet" financials (or your most recent annual Income Tax Form") for the most recent 12 month period along with this Survey Form.*

Please send your response in the enclosed postage-paid, self-addressed envelope before **May 31, 1984 to:**

Industry Insights, Inc. • P.O. Box 155 • Dublin, Ohio 43017 • (614) 889-8284

Indicate below to whom any questions regarding this Form should be directed and to whom the final report should be sent. Industry Insights will detach this coupon to assure confidentiality.

Name (Questions) Sample Company Phone ( ) ____

Name (Report) ____

Company ____

Address ____

City ____ State ____ Zip ____

CODE NUMBER ☐

CONFIDENTIAL
AMERICAN SUPPLY ASSOCIATION
1984 ANNUAL OPERATING PERFORMANCE SURVEY
(Based on 1983 Financial Results)

CLASSIFICATION DATA

Ending 12 month period upon which this data is based. (1) 02 31 83 month/day/year

Number of locations (including headquarters) which are included in the data reflected on this Survey Form. (Do not submit separate forms for branches.)

(2) 2

Regional Identification: Check (√) only one of the boxes below:

(3)

		Territory	Regional Association Affiliate	
1)	☐	CT, ME, MA, NH, RI, VT	PHWNE	
2)	☐	NY (excluding NYC)	NYSPHW	
3)	☐	Long Island and Metro NYC	JCA	
4)	☐	DE, E.PA, MD, NJ, Wa.D.C.	MAWA	2
5)	☒	IN, OH, W.PA, WV	CWA	
6)	☐	AL, FL, GA, KY, MS, NC, SC, TN, VA	SWA	
7)	☐	Michigan (excluding Upper MI)		
8)	☐	Metro Chicago, Northern IL		
9)	☐	IA, KS, MN, MO, NE, ND, SD, Upper MI, WI	MASA	
10)	☐	LA, TX, NM, OK, AR	WDA	
11)	☐	Rocky Mountain (CO, ID, MT, UT, WY)		
12)	☐	Pacific NW (AK, OR, WA)		
13)	☐	HI, N.CA, N.NV	NCSA	
14)	☐	AZ, S.CA, S.NV	PSDA	

Product Sales Mix--Please indicate the percentage of your total company sales accounted for by each type of product (estimate if necessary):

(4) 30 Plumbing Supplies & Equipment, Including Plumbing Pipe, Valves & Fittings.
(5) ____ Hydronic & Warm Air Heating & Air Conditioning Supplies & Equipment.
(6) 30 Industrial P-V-F (Industrial Pipe, Valves & Fittings).
(7) 30 Other Industrial Supplies & Equipment.
(8) 10 Other (Please specify: ____________________).
(9) 100% Total

INCOME STATEMENT ITEMS

LINE NO.		CODE #	AMOUNT IN DOLLARS (Omit Cents)
1	Net Sales (Include direct shipments. Deduct claims, returns & allowances but not cash discounts allowed on sales. Exclude sales taxes.)	(10)	$ 5,884,780
2	Cost of Goods Sold (Include inbound transportation costs. Subtract purchase claims, returns and allowances but not cash discounts on purchases.) (FIFO basis)*	(11)	$ 4,392,299
3	Gross Profit on Sales (Line 1 minus Line 2) (FIFO basis)	(12)	$ 1,492,481
4	Selling Expenses (refer to definition sheet)	(13)	$ 280,652
5	Delivery Expenses (refer to definition sheet)	(14)	$ 177,206
6	Warehouse Expenses (refer to definition sheet)	(15)	$ 197,090
7	General & Administrative Expenses (refer to definition sheet)	(16)	$ 562,999
8	Occupancy Expenses (refer to definition sheet)	(17)	$ 74,396
9	Other Operating Expenses (refer to definition sheet)	(18)	$ 31,278
10	Total Operating Expenses (Sum of Lines 4 thru 9)***	(19)	$ 1,323,621
11	Net Operating Profit (Line 3 minus Line 10) (FIFO)	(20)	$ 168,860
12	Non-Operating Income (Include cash discounts on purchases, interest earned and other income items not directly related to the primary operations of the business)	(21)	$ 34,838
13	Non-Operating Expenses (Include cash discounts allowed on sales, interest paid, losses on sale of fixed assets, and other non-operating expenses or losses not already included above)	(22)	$ 89,562
14	Net Profit Before Taxes (Line 11 plus Line 12 minus Line 13) (FIFO)	(23)	$ 114,136
15	Income Taxes (Federal, State and City)	(24)	$ 44,321
16	Net Profit After Income Taxes (Line 14 minus Line 15) (FIFO)	(25)	$ 69,815

BALANCE SHEET ITEMS

17	Cash (Includes savings accounts, CD's, and other temporary investments)	(26)	$ 159,182
18	Accounts & Notes Receivable, Trade (Net)	(27)	$ 1,096,734
19	Inventory (FIFO basis)	(28)	$ 983,840
20	Other Current Assets (Such as prepaid items, supplies, etc.)	(29)	$ 18,394
21	Total Current Assets (Sum of Lines 17 thru 20)	(30)	$ 2,258,150
22	All Other Assets (Any assets not included above)	(31)	$ 111,740
23	Total Assets (Sum of Lines 21 and 22) (Equal to Line 28) (FIFO basis)	(32)	$ 2,369,891
24	Total Current Liabilities (Due in less than 1 year)	(33)	$ 520,042
25	Total Long-Term Liabilities (Due in more than 1 year)	(34)	$ 777,250
26	Total Liabilities (Sum of Lines 24 and 25)	(35)	$ 1,297,292
27	Total Net Worth (or Owner's Equity) (FIFO)**	(36)	$ 1,072,599
28	Total Liabilities & Net Worth (Sum of Lines 26 and 27) (Equal to Line 23)	(37)	$ 2,369,891

*If on LIFO, subtract your "Annual additions to your LIFO reserves" from your cost of goods sold to obtain FIFO cost of goods sold.

**If on LIFO, add your total LIFO Reserve to your book net worth to get your FIFO net worth.

***If you are a Subchapter S Corporation or a partnership, allocate an appropriate management salary for Owner-Managers to the applicable operating expense category(s) and to total operating expense. This would be an amount similar to what would have to be paid to a non-equity owning manager or managers. Doing this will assure that your numbers will be comparable to corporations paying separate management salaries.

COMPENSATION DATA

LINE NO.		CODE #	AMOUNT
29	Total Payroll Expenses (Include salaries, bonuses and commissions paid to all employees, including owners; exclude fringe benefits and payroll taxes)	(38)	$ 604,313
30	Total of Fringe Benefit Payments and Payroll Taxes (Include company pension and profit sharing payments plus FICA, Workman's Compensation, Unemployment, Group Insurance, etc., for all employees, including owners)	(39)	$ 234,303
31	Gross Income of the Highest Paid Employee, Including Owners (refers to the person's W-2 statement gross income--as from salaries, commissions and bonuses, but excluding fringe benefits and payroll taxes)	(40)	$ 50,000
32	Gross Income (as above) of the Second Highest Paid Employee (including Owners)	(41)	$ 45,000

WAREHOUSE AND DIRECT SALES DATA

33	Dollar Amount of Direct (Drop) Shipment Sales	(42)	$ 644,644
34	Dollar Amount of Warehouse Sales--Counter	(43)	$ 1,210,034
35	Dollar Amount of Warehouse Sales--Delivery	(44)	$ 4,030,102
36	Total Dollar Amount of Warehouse Sales (Sum of Lines 34 and 35)	(45)	$ 5,240,136
37	Total Sales (Sum of Lines 33 and 36) (Equal to Line 1)	(46)	$ 5,884,780
38	Dollar Amount of Gross Profit on Direct (Drop) Shipments	(47)	$ 96,264
39	Dollar Amount of Gross Profit on Warehouse Sales (Report on FIFO basis)	(48)	$ 1,396,217
40	Total FIFO Gross Profit (Sum of Lines 38 and 39) (Equal to Line 3)	(49)	$ 1,492,481

ADDITIONAL DATA (VERY IMPORTANT)

41	Previous Year's Net Sales	(50)	$ 6,002,478
42	Previous Year's Ending Inventory (FIFO basis)	(51)	$ 992,313
43	Average Number of Employees During 1983 (Include all management personnel and all other employees. Convert part-time employees into full-time equivalents depending upon how much they worked relative to full-time employees. For example, two half-time people each working 12 months would be counted as one employee)	(52)	# 21
44	Percent of Total 1983 Sales That Were Made for Cash (estimate if necessary)	(53)	17 %
45	Were you on a LIFO inventory valuation system during 1983?	(54)	Yes ☐ 1 No ☒ 2
46	Total Number of Customer Invoices During the Year	(55)	# 21,484
47	Annual # of Billing Lines on Customer Invoices (estimate if necessary)	(56)	# 171,872
48	Interest Paid in 1983 (Also include this amount in Line 13)	(57)	$ 13,092

DETAIL OF ACCOUNTS RECEIVABLE (END OF YEAR)

LINE NO.		CODE #	NUMBER OF ACCOUNTS	CODE #	AMOUNT IN DOLLARS
49	Current (Amount is being paid as contractually agreed)	(58)	# 257	(64)	$ 571,339
50	1-30 Days Past Due	(59)	# 47	(65)	$ 154,748
51	31-60 Days Past Due	(60)	# 17	(66)	$ 189,310
52	61-90 Days Past Due	(61)	# 9	(67)	$ 71,667
53	Over 90 Days Past Due	(62)	# 19	(68)	$ 109,670
54	Total Accounts Receivable (Sum of Lines 49 thru 53) (Equal to Line 18)	(63)	# 349	(69)	$ 1,096,734

AMERICAN SUPPLY ASSOCIATION

DESCRIPTION OF OPERATING EXPENSE CATEGORIES

Selling Expenses

Selling executive salaries, commissions and bonuses; outside and inside salespeople salaries, commissions and bonuses; other selling personnel (clerical, secretarial and order takers) salaries, bonuses and wages; selling personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

Selling related: supplies; stationery; printing; automobile expense; travel and entertainment; dues and membership; conventions and meetings; education and training; advertising; promotions; brochures; showrooms; merchandise shows; miscellaneous.

Delivery Expenses

Delivery supervisor(s) salaries and bonuses; other delivery personnel (clerical, secretarial, drivers) salaries, bonuses and wages; delivery personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Delivery related: supplies; gas and oil; tires; other automotive supplies; towel and uniform services; trucks, automobiles and other equipment repairs and maintenance; insurance (automobiles and trucks); licenses; equipment rental; trucks, automobiles and other equipment depreciation; dues and memberships; education and training; travel and entertainment; delivery services (cartage, freight, express); miscellaneous.

Warehouse Expenses

Warehouse supervisor salaries and bonuses; other warehouse personnel (clerical, secretarial, laborers, and other) salaries, bonuses and wages; warehouse personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Warehouse related: supplies; travel and uniform services; equipment repairs and maintenance; insurance (inventory); equipment rental and depreciation; education and training; travel and entertainment; miscellaneous.

General and Administrative Expenses

Executive salaries and bonuses; supervisor salaries and bonuses; other salaries and bonuses (including buyers); general and administrative personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

General and administrative related expenses (including purchasing expenses): supplies; stationery and printing; travel and uniform services; telephone and telegraph; postage; automobiles and other equipment repairs, maintenance, and depreciation; insurance (property, automotive, etc.); licenses; equipment and automobile rental; furniture and fixtures depreciation; automobile expense; travel and entertainment; dues and memberships; conventions and meetings; education and training; employment advertising; collection expense; cash over or short; donations; accounting services; legal services; other services; directors fees; miscellaneous. Also include bad debts written off.

Occupancy Expenses

Facilities management supervisor salaries and bonuses; janitor and maintenance personnel wages; occupancy personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Janitor and maintenance supplies; building and building equipment repairs and maintenance; janitor service; building and building equipment insurance; real estate taxes; rent (if applicable); building equipment rental; utilities (power, light, water, heat); building and building equipment depreciation (if applicable); miscellaneous.

Other Operating Expenses

All operating expenses not specified above.